Dear Mr Johnson

It is unfortunately
impracticable for me to come
up to Town to the Meeting
of the Standard Commission
on the 28th Inst. and
for any Less Joint Land me
or I would Have been very
happy to have joined your
Dinner Party on the 26th, —

21 MY 21
1841

Dr. J. Gatcombe Esqr
23 Jermyn Street
London

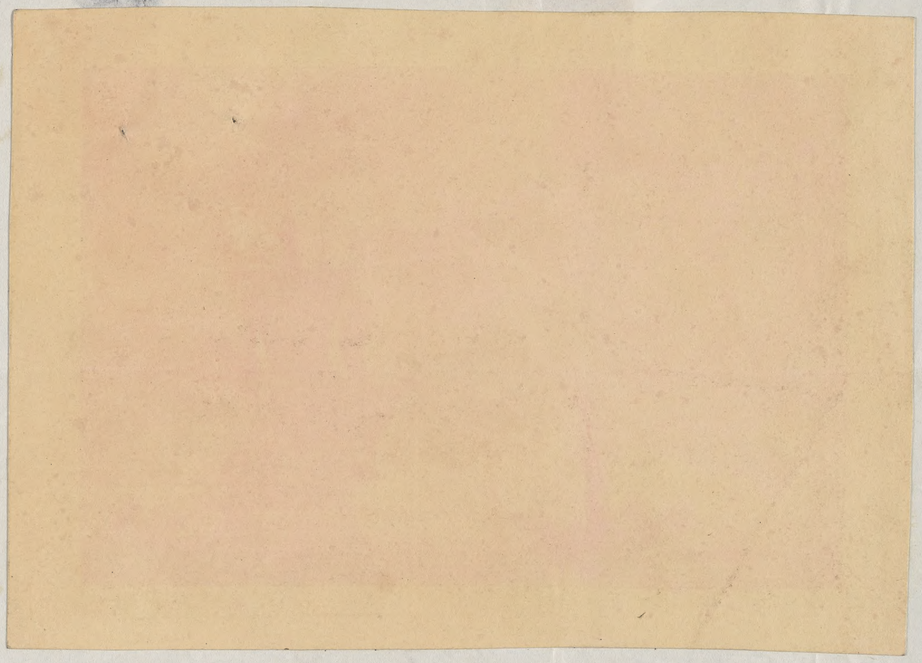
PENNY POSTAGE

1 AM
MY 20
1841

Phfsq

please I have however deny
myself.

I annex a yellow Photograph
which was taken this morning. —
With Compts to Lady Lubbock &
while Lady L
denies to join
herein in
my dreadful
queer ugly
Hitherto



and a few Photographs
are also annexed. —
I have also succeeded in
obtaining fine blues, Purples,
and some other tints

DSI

15

— Wagner Esq
Eton
2

S D

Dear Sir — The Occultation
I spoke of the other day commen
ces at two minutes before 5
on the 18th (~~tomorrow~~ Wednesday) and lasts
about 20 minutes and the requi-
-ring in all probability will not
be visible as Jupiter & the moon
will just be on the horizon about
that time. Indeed from the low
situation of both luminaries the
phenomenon will be much less

interesting than I
hoped. However
events endeavour
if you & your
Aunt. The chance
be very long probably before anything
similar occurs) I shall be happy to be your.

I'd first day
I shall at all
do observe it, &
just as like to

Very sincerely yours.

J. F. W. Herschel

and Compliments implied in being) for a moment
considered worthy to fill such a Situation, I feel
I feel myself under the necessity of requesting that,
in case any such idea should be entertained
in the University, with your sanction (which from
a communication made to me as Newcastle, I am
led to presume the case, and I need not say how
highly I should appreciate in a personal form of
view such a testimony of your approbation) you will

Allow me to remain

Dear Sir

with many sentiments of respect

Your Obedient Servt

J. F. W. Herschel

DSI

Tennyson "Creates Spaces to be lighted" is fine — but the Hymn is so devious & removed from the Song of the Angels in their appearance to the Shepherds, that it seems out of place in a pagan poem.

My publisher (Macmillan) insisted so strongly on the italicizing of the non-Homeric or Platonic words & phrases, that I have felt obliged to let him have his own way.

I remain dear Sir
with very sentiments of respect & esteem
yours very truly
J. Addington Symonds.

Science

DSI

Ashwood
Apl 5/80

Dear Sir

Your Check for your
last attendance to my Son
for the Certificate — I
enclose 30 P.O. Stamps as
the readiest way of keeping
clearing the fee & have
the honor to be

Yours very obt Servt

J Hutchinson

Revd E. H. Robinson

ISO

Collingwood
June 7/48

Sir—

A copy of my work entitled
"Results of Astronomical Ob-
"servations at the Cape of Good
"Hope" will be delivered to you
or your order by Messrs
Smith Elder & Co
at 65 Cornhill
London
on application there for the
Shetland Library
Shetland Lerwick Zetland
-lands to your request on
behalf of that Institution

but until aware how far the copies devoted to the purpose of distribution would satisfy the claims upon them I was obliged to defer it.

Should you see the Nassaughs (to whom your letter refers) they may be so kind as to inform him that I shall forward him a copy in a few days by the hands of a mutual friend who will soon leave this neighbourhood for Liverpool

I am Sir

Your obedient

humble servant

J. W. Herschel.

the case, I trusted to him his
assn that I should leave
those documents — and on
mature reflection I deem
I ought to do so for
only in compliance with
his wish as a friend,
but that I may feel
enabled distinctly and as
from my own knowledge
to deny any unwarrant-
-able or unfavorable re-
-marks or inferences which
may come to my knowledge
respecting his conduct in the
affair. In my I therefore request

DS

Dear Sir —

I am requested by
Sir J. Napier to apply to
you for the perusal of certain
papers relative to his
communications with Captn
Sir St. Stackenstrom. Sir Jas's
directions are "I beg you will
be so kind as to write to Sir
St. Stanley and tell him you
have been requested by me
to say he will lend you the
whole of my statement and
papers relative to Captn

24. 157.

taken from us I write to
her you as my friend to
explain everything connected with it
and that you will show them
them to him as they are
merely for your own private
reading." —

It was not my intention
to have given you this trouble
as I feel that no such formal
can add anything to the confi
-dence I already feel of the perfect
honour, disinterestedness and good
feeling which have dictated every
part of his conduct as regards
Captn S. — and as I think I
already so fully understand the
position of the parties towards
each other, as to be enabled
to trace with perfect clearness
any misunderstanding which may
have unhappily arisen between
them & the peculiar circum
stances attending that position
circumstances quite independent
of any act of Sir G. Hayes's
and which he must cancel
labour more heavily to
overcome. The influence of
under these impressions
it was, as I have already
directed that my intentions
have translated your fa
-thers papers. — but from
Mr Lowes who has just left
me, I learn that Sir G.
Hayes is just before his leaving

Sir, Leave this style of Hyperion to writing to you on the Second of my Lessons, Intercourse — but on this subject I cannot — chuse my Phrases or restrain my feelings — believe me

Dear Sir

Your very obedient

J. H. Stansfeld.

Collingwood
Stankhurst
Kent

May. 1. 1840.

DSI

that you will in your convenient Transmit them to this address to be returned as speedily as possible.

I have a high Regard & Esteem for Captain Boteler — from and I think had in — formation and judge of his conduct and present impressions very large allowances are to be made for a man of strong sensitive feelings & perhaps something of a sombre and melancholic hadnue, placed for so long a period in circumstances of the most irritating and embittering

description — sacrificing his prospects (probably utterly ruined in a world of point of view) in the endeavour to follow out unfalteringly the conscientious impulses of his principles, in accordance with the views of his Government. — Certainly in all my communications with him I have found him perfectly ready to fall in with every wish of Sir G. Hartwell — quite prepared to resign office in favor of Colonel Hare — Entirely sensible of the inconveniences which his peculiar situation entailed on his Lieut. Governorship of the Leeward Islands — and imbued with a full appreciation of and admiration for Sir G. Hartwell's talents, character, and principles as well as with a warm & grateful sense of his conduct to him personally. — Under such circumstances & impressions I cannot bring myself to believe that a Cavalry Brevet can subsist between two such Men

I hope you will, my Dear

Rpl

107

Dear Sir/ I have in pursuance of
Mr Littrows request, taken the liberty to direct
Mr Molyneux to address to you a Clock
made by him for Profr L. and have this
morning received the agreeable (but unexpec-
-ted) intelligence of its safe arrival at
Hamburg on the 5th inst. I say unexpec-
-ted, as that port being usually blocked
up with ice at this season, I had not
reckoned on its arrival till the Spring
My object in writing this is to advertise

13.- 57.

Prof.r Schumacher
Hamburg
by Altona
Palmaille

Sylvia's Pen Paid
Hamburg

GREAT BRITAIN
PAID
22 FEB 57

FEB 25

DSI

Y.L.W.

1992-YL

you of the fact, that you may take the proper measures to forward it to its ultimate destination if not done already

The Ship is "The two Brothers, Robson", and may be heard of by Enquiry of Mr. R. M. Sloman, Broker Hamburg

You would oblige me much by addressing a line to the Artist Mr. Molyneux N° 44. Devonshire Street ~~Port La~~ Queen Square London, when you receive the Clock, as he is naturally anxious to hear of its safety.

I Enclose a Catalogue sent me lately by Mr. Pond containing a Statement of

differences between his own, & Brinkleys, and Mr. Bessels' Declinations — from the Observations of the last year. It is probably not new to you, but as there is a possibility of it not yet having reached you I send it

I am dear Sir

Your obd.t Serv.t

J. F. W. Herschel.

9. Downing Street London.

Dec. 20. 1822.

Southampton. Aug 1. 1828

Dear Sir

I have lead Mr. Knowles' paper & think (as I have not the pleasure of its author's acquaintance) I prefer making my Remarks on it to yourself from whom I received it as, although I cannot possibly have the least objection to your communicating the whole or any part of them to him, I am unwilling to involve myself in any correspondence on the subject in defence of my views, should it not prove such as further reflexion may lead him to form.

I obtained my first knowledge of the differential calculus from Simpsons Fluxions of which it appears to me that the groundwork is the identical principle which Mr. Knowles proposes to start from. — Viz: that the fluxion of a quantity is the velocity with

DSI

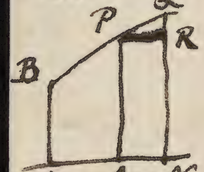
many thanks for your Paper.
I am before I left Slough I get observations enough to satisfy me about 2 Satellites to ♅ whose orbits are such as my Father conceived and I am almost sure there are three. — ♅ plane is very unfavorable & Corvus has changed quadrants since 1825 & its motion is much more rapid than we supposed (South. & myself)

PS. Have you seen Leslie's Geometrical Analysis &c lately published. Should be glad to see it & to know your opinion of it. Let it come by Coach

Yours truly
J. W. Herschel

While it flows or changes magnitude — & thinking that velocity not by the actual quantity by which it really does change in one unit of time — but, by the quantity by which it would change in that time were it to continue from the instant in which it is considered to vary uniformly.

Simson applies this to tangents precisely as Mr K. does — viz by the triangle PSR in which SR represents the hypothetical uniform variation and QR the actual variation of the ordinate. I omit-lect his notion of the generation of areas too



The area NPRN or yx is the area by which NBPN would increase while x increases uniformly by NN' or ix provided its rate of increase continued uniform from P to — While its actual increase is represented by PNN'Q in the same time

The reasoning in Mr Knowles' note (A) is I presume that by which Every one would rationally connect this notion of fluxions with the purely analytical theory of increments in Taylor's Theorem

The reasoning employed in the body of the Paper for that purpose I confess, after reading it over several times, I do not under-Stand.

I address this to you as being to Edmunds, into the Paper itself I send by today's coach to York Gate: we are endeavouring to get rid of a few weeks by a system of daily transplantation from place to place along this line of coast at the rate of about 20 miles per diem and if we can muster up Energy enough shall probably take a ride round the Isle of Wight. My Mother desires to be very kindly

Sir J. Hawkins presents his
Compliments to the Lords of
the Admiralty and with
great deference begs leave
to submit to their
Lordships a subsequent Ms.

DSI

Dear Lady Lyell

I sympathise with you
and hi C. in your sorrow
In your and his bereavement
in this your darling boy
in March. Believe me
Ever very truly
J Larkbrooke

Harley Street. Aug 19/15.

DSI

of a decimal foot

If the Indian Commissioners should recommend substitution the adoption of the decimal foot as their standard foot — there would be no great harm done the weights & measures remaining intact & the change in the Indian standard imperceptible in any commercial transaction

As far as I understand the object of your Commission — it is not authorized to make or recommend any alteration in the British imperial Standard for adoption in India but only to assimilate the Indian legal measures to the British.

I have the honor to be
Dear Sir
Yours very truly
J. W. Herschel

P.S. Retaining our standard I should

Sir John Herschel.

Collingwood July. 28/66

Dear Sir

I forwarded all the documents I could procure on the subject of the Parliamentary Committee &c on the subject of weights & measures through the Indian Office during last autumn in making for the first — and Mr. C. Mitchell informed me that it would be by the Spring of May 1867 in addition to my own paper on the Gaud Pendulum & others which had I forwarded by hand previously

If there be other documents of a public nature I think it would be best for your Commission to apply for them officially.

W. Hasley Esq &c &c

I am very sorry to understand from you that there should be any prospect of your Indian Currency scheme recommending the adoption of the Decimal System. — I do not believe that that System will ever become the British System to the abolition of our present Standards. It is all very well for a body of administrators of the French System to have passed a bill permissive of its employment but I can never persuade myself that anything beyond this will ever become Law in England — and it would be I think a most fatal thing for the Indian Government to push forward in advance of the Home Legislature and Establishments in India a System which will create a repugnance of mutual understandings with the Bankers of Englishmen & Statesmen & Financiers for such a subject & on such grounds

The simplicity & excellence of our present System when put into the following form of Statement is very striking

Lst. $\frac{1}{500\,000\,000}$ th of the Earth's polar axis be called a Geometrical Foot. — Then

1. One actual imperial Standard ounce = the weight of pure one thousandth part of a Cubic (Geometrical foot of distilled water at the actual Imperial Standard temperature (without any alteration)

2. One actual imperial half pint measure = exactly the 1000th part of a Geometrical Cubic foot — (without any alteration)

3. One actual Imperial Standard Yard foot is exactly $\frac{999}{1000}$ ths

1828

Kensington Oct 23. 1828

My dear Sir

When I say that
this will be delivered to you by my
Lifes Friend and friend Capt Franklin
the Commander of the late overland
North Western Expedition, I am sure
that you will feel as highly gratified
in the opportunity of becoming acquainted
with an Officer so much an ornament
to his profession and a benefactor

To
Alex. Baring Esq.
Queen Square
Bloomsbury
Capt. Franklin

to Lucina as he will in meeting with
yourself. I will therefore confidently
recommend him to your attentions

I hope your new Observatory
is going on well. If I can be of
any service to you among our
Opticians, I pray you to command
me without Scruple

Believe me
Dear Sir
Yours very truly
J. F. W. Herschel

DSI

HERSCHEL, William, *hersh'-el*, a great astronomer, was the son of a clever musician of Hanover, and followed, for some time, the profession of his father. In 1759 he went to London, and, for several years, gained a scanty livelihood by giving lessons in his art. Becoming organist at Halifax in 1765, and of a chapel in Bath in 1766, his condition was much improved. In the latter place he began to turn his attention to astronomy, and attained to a considerable degree of proficiency in its pursuit. Being unable to purchase a telescope, he, in 1774, proceeded to make one for himself. After many disappointments, he at length succeeded in constructing a Newtonian telescope of five feet focal length. This instrument was a most valuable adjunct to his studies, and, in 1781, he announced his discovery of a comet, but which soon turned out to be a planet. This discovery made him famous, and he was appointed private astronomer to George III., at a salary of £400 a year. He removed to Slough, near Windsor, and henceforth his abode "became one of the remarkable spots of the civilized world." His labours were shared by his sister, Miss Caroline Herschel, who assisted him in his observations and calculations. After having finished more than one large instrument, he constructed the most powerful telescope then known, and, after four years' labour with these instruments, he made the most unexpected and important discoveries. A new planet,—Uranus, in 1781; its satellites in 1787; two new satellites of Saturn in 1789; the rotation of Saturn's ring, and that of Jupiter's satellites, are among the principal of his invaluable discoveries. More than seventy of his memoirs on astronomical subjects are contained in the Transactions of the Royal Society; and his papers on the construction of telescopes remain unsurpassed even at the present day. He became an F.R.S., and afterwards president of that learned body. He was also knighted, and received the degree of doctor of laws from the university of Oxford. B. at Hanover, 1738; D. 1822.

HERSCHEL, Caroline Lucretia, was sister of the above. She came to England in order to reside with her brother, while he was engaged as organist at Bath. From the first commencement of his astronomical pursuits, she attended him in both his daily and nightly studies. In the intervals of her labours under her brother's direction, she observed the heavenly bodies on her own account. She discovered seven comets, and, in 1798, published, with her brother, "A Catalogue of Stars, with a Correction of Flamsteed's Observations." On the decease of her brother, she returned to Hanover, where, for twenty years longer, she continued to labour at her scientific pursuits. The Royal Society voted her their gold medal, and she was also an honorary member of the same. She lived to the age of 98 years. B. at Hanover, 1750; D. 1848.

HERSCHEL, Sir John Frederick William, is the son and worthy inheritor of the fame of William. From his earliest years he was distinguished for his great mathematical powers, as well as his love for physical science. He became a B.A. of St. John's College, Cambridge, in 1813; and, on the death of his father, continued in the path of discovery pointed out by him. In 1825 he commenced observing the heavenly bodies, with his father's instruments and after his method. This pursuit, in which he was assisted for some time by Sir James South (*see* SIR JAMES SOUTH), lasted during eight years, and produced the most brilliant results. In his work, observations of 2,306 nebulæ and clusters are contained. The Royal Astronomical Society voted him its gold medal for his observations of the double stars. In 1830 he published a "Treatise on Sound," and a "Treatise on the Theory of Light," as well as the "Preliminary Discourse on the Study of Natural Philosophy," published in Lardner's Cyclopædia, for which series he also contributed his excellent treatise on Astronomy, in 1836. In 1834 he sailed for the Cape of Good Hope, in order to make observations of the southern heavens; and for four years, at his own expense, uninterruptedly watched the skies, and nine years after his return, he, in 1847, published the results of his labours. His honourable career has been appreciated by the learned men of all nations; the Royal Astronomical Society voted him, a second time, its gold medal; he has been made D.C.L. of Oxford; and, in 1848, he became president of the Royal Astronomical Society. His "Outlines of Astronomy," "Manual of Scientific Inquiry," have made the profound science he adorns popular with a large section of the reading public, and have been translated into most of the European languages. In 1850 he was made master of the mint, an appointment he was compelled to resign in 1855, on account of ill health. B. at Slough, near Windsor, 1790.

P.S. I have your note
& will mention the subject in
my address — only hope to do
so sometime before the time when is welcome or

My dear Sir

will you send to
me at 11. B when you
think I can best make
my appearance on your
platform — I may have
a few words to say and they
will be very few, and I
cannot be by absence from
the S. Yours very truly
J. F. W. Herschel

7/6

Lord Jno Hall
Dr Barry

DSI

Ashgrove
May 29/69

My dear Ir

I have to mention in
my letter of yesterday that the
Comet seen of the comet
of 1843 could hardly be viewed
as a shadow of the head of a
Coma — deep Red — in all its splendor
the tail very Red. in all its splendor
and strength all along the sky in
the evening twilight — the head &
coma were barely discernible in
my 7 ft Newtonian. Telescope — and on
the next night a night after had
Vanished altogether the tail con-
-tinuing marked as last night
I am my dr
F Whipple Ch

DSI

Observatory April 15/64

Sir

I have the honour to

acknowledge the receipt of

Mess. Wesley agent for the

Smithsonian Institution of

the Volume of Astronomical &

Meteorological Observations made

at the Washington Observatory

during the year 1862 and to

which they have kindly added

a Memoir

I am Sir

Very respectfully

Your obedient Servt

J Hubbard

Prof. J. H. Gillespie
Washington Observatory
U.S.A.

Meraekel

Oblighed Dec 10/61

Dy Mem h.r

Hustru K. J. Knudsen over-
drager hans Gods Gjæld
til Sofie Olsen, og kræver
dertil) givne Ret- og eiendoms-
dom til at Gjælde en Del Varer
til Dag og Gjælde Rente af Dem
efter Auktion Regnskab for Dem
til Skifte Rettens Kjendelse
Dato 9 Januar 1861 og Gjæld-
dom for Dag ved Auktion Taxering
efter Auktion Regnskab for Dem
til Skifte Rettens Kjendelse
Dato 9 Januar 1861 og Gjæld-
dom for Dag ved Auktion Taxering

[illegible]

[illegible]

[illegible]

(Circular.)

Royal Mint,

November, 1854.

Sir

~~Gentlemen,~~

The Government being desirous of obtaining information on which to form a judgment how far the introduction of the Florin or Two Shilling piece as an element of the Silver Coinage of this Country has been approved; and, if approved, how far on its own merits as a convenient element of value in itself, and in its relations to the higher and lower denominations of Coin, and how far as a presumed stage in the transition to a decimal Coinage with the Pound unit as its basis: I shall be much obliged by your informing me at your early convenience, of your own impression on these points, as grounded on the experience of your transactions with the Public; and, in particular, (as regards the Half Crown and the Florin) whether it appears to you that any preference of the one over the other of these Coins is manifested in the demand of the Public for Silver at your hands; and the grounds of such preference, in so far as they may have come to your knowledge.

I have the honor to be,

Gentlemen,

Your obedient Servant,

J. Graham

Master of the Mint.

J. E. Hubbard Esq

~~Master~~ Governor of The Bank of England

~~& Co., Bankers.~~

DSI

1/1

R. Smith

May 25 1853.

Dear Sir

Since I saw you we have had
an election for Members of
Congress more than two years
the elected Members recently
held in my absence Friendly
adopted the same arrangement
respecting their mode of Conveying
and taking the Oaths prescribed
as before. Yours very truly

J. Wetherbee

Hon. Hannibal

DSI

Collingwood

Darkhurst

Kent

Aug 30/46.

Madam

You do me only too
much honour in your
kind intended of dedicating
your work on Andromeda to
me — for can I justify this
to the Lemma in which you
propose to do so. I grieve
exceedingly for the difficulty
that you take but was
succeeded by having many
other letters to write

I have the honour to be

Madam

Your very obedt Servt

J Hutchinson

DSI

Compliments to Mr Cameron and begs
leave to send him Lady H Cadogan's very
dear Mr Cameron
Yours very faithfully
J Lubbock.

Caleyward Bury 9 1856

My dear Mr Cameron

I write not almost a post to so own
without acknowledging the arrival of your very
kind present of "The Virgin Widow". I long
to devour its leaf as yet have only had the
pleasure which makes me tremble but any
thing connected in a lighter strain should join
upon Tedium chords stretched to a high and easy
harmonious tension, in unison with the lofty &
solemn tones of Philip van Artevelde
I take heed however in considering these
your food taste and your high intellectual
has destined to such short — so that

DST

my dearest and most mathematically conditioned nature is in no danger of any such recession. — In brief I expected a peace, though I might perhaps have expected a different style of cuisine from that provided — how nervous

It is putting my view of the Indian proposition in far too strong a way to say that I differ with one so much better competent to judge than I can profess to be. It may very well be the case — and I do not say it is so that the time is arrived when a step ought to be taken, in conformity with a pledge given. But it is not the less certain that, that step taken, we do indeed bring on a career of a totally different kind from that we have before us, and which Providence may & I trust will condemn to a happy conclusion — but in which a few false steps may bring everything to dis-

aster. — The only problem is how to keep the peace under our control — and that will be settled rather by the counsels of those who know India and how to guide it. I did not say how unmoved I stand face by any such communication of the Cameron or that (or any other) Sceptic, as your attitude to — or what fortification it will afford me to take it over with him here in our case witnesses and think I cannot shadow — albeit in such matters I have every thing to learn.

Lucy H has made the promise that I write not a word of the Fiji Widow without her — but a word of the Fiji Widow without her seems to say there needed no such compact. The tender & poetic feeling are so exquisite that I value & prize them as the highest enjoyment of the highest poetry never have entire enjoyment of the highest poetry apart from her — her touch enters upon it this evening. — And lo! our cousin to announce Tea ready — and so I must conclude, with love

Henley Street
June 9/52

My dear Mrs Cameron

I cannot help my
husband in his busy
wish to answer your letter
Julia into your hope
keeping today - and in having
Bright hair in the way
when you and your
charming sisters called her
last year! for some months
to come I must look you

myself an off from
society and labour in the
vast Hammonium or
which in this Hammonia
up so much depends.
However I venture to
for a time the more willingly
(though in fact confident she
will be perfectly happy and
thoroughly cared for under your
kind care) — as I can see
little or nothing of her while
here, and now her sisters
are (and away for some days
on a visit she could not be
very happy here. I shall
not think you will find
her a plague and she is
prepared to look up to you
with much reverence &
affection.

Believe me
Yours sincerely
J. H. Worsley

Dec 22 1853

My dear Mrs Cameron

A note of Annie written
this morning is on its way
to Lord Sheen Lodge where
is were not find you. I
knew not of your flitting!
My wife wrote me to say
she wished Julia to accompany
me to Handsworth on Saturday
& there be Photographed with
the Chaps — And can you
so arrange as that the
three may be at the

Station (London Bridge)
at ¼ past 5 (to go by
the 5½ Train) I am
requested to be at my
Godmothers on Saturday
and I shall not be able
to be away till my usual
5 P.M. Should you be
able either to bring her down
a Lend her in the Care of
some friend — if she will
(should the answer before me)
be in the Waiting Room I
will go there the first thing
on Saturday will leave
the Manor at 8.h 32.m as
Ettingham

I will not keep you
Lewens waiting further
than to say how sorry
I am with you painful
in what you say about
your Sister.

Yours ever faithfully

J. H. Wheelock

My dear Sir Robert

I am really glad to hear that such a tale as yours deserves it to be brought in by the Sol. Gen — I only wish the naughty youths whose conduct gives rise to it could by some fiction of Law be made to participate in its benefits in proprio persona

A very fine little lad of my acquaintance some while ago had been told by his Mamma that she was afraid if he continued some naughty trick that the Devil should fetch him. — He retired with a tearful countenance and when sent to bed at night had obviously something on his mind — after a little humming, and it came

Aunt! said he drawing her close to him
and speaking through sobs — if you think a
whisper will do me good — if you please, sing
me one. — Now I should think it a
great sign of grace if Dr Lloyd would
come to the Solr General as soon as this
bill is passed — (properly attired for the
occasion) and request a salutary admi-
-nistration of such wholesome discipline.

I shall be very glad to see the drop
of the bill. I really don't see why
the protection should be confined to one or
two institutions. I know the Land has a
horror of Sinecurities but under favour, I
have no scruples of the kind

I am very sorry I shall not be able
to come up on the 27th. were it
otherwise the recollection of the last
agreeable meeting of the Rf Club
I attended would ensure my at-
tendance at the Crown & Anchor

What an artful & sad sound this
sudden end of Prof. Daniell!! "In the
midst of Life" indeed! It must have
been a Remembrancer warning to all
present

Lady H desires me to thank you
for your kind Remembrance of
her & I remain

my dear Sir Robt
Yours very truly
J. W. Herschel

Collingwood
March 18/41

Slough

Augt 4 30/39

From Sir John F.W. Herschel to Profr Elliott
Professor of Mathematics (Liverpool)

Sir

I have the honor to transmit
for your account of the Phenomena with
an wish my d Mayne'd think you consider
ation of the Phenomena of Saturn's ring
contained in your letter of the 18th inst
which I have just found on my
return from France. —

My attention being at present wholly
directed to other objects, it is not possible
for me to enter with any effect
into the theory of the movements of a

my under such circumstance, — in consequence of which I must abridge my present hasty with offering you my thanks for this attention — & with placing your letter among the collection of papers to be ~~referred~~ consulted to in the event of a new edition of my work on Astronomy being called for. I remain Dr Sir Yours very truly Lord

W Herschel

P.S. The newspaper alluded to is

your letter has not come to hand or else has been forwarded in my absence with other newspapers to a further destination — a holiday (if charged with postage) re-turned by my steward to the office accordingly &c. a general order to that effect — &c all are made to ascertain the fact — but your drawing is so clear as to render it I should apprehend superfluous, as Holmesby of the Hermit — Gratton

Sir J. F. W. Herschel

30 May 1839

Ja.s Elliot Esq.

21 Brownlow Street

Liverpool

Sir Thos. Phillipps Bart. F.R.S. &c. &c.
10 Feb. 1845

Middlehill
Worcestershire

My dear Sir Robt

I do not know when I have been struck with more horror than at reading the account in the papers of the wanton destruction of the Portland vase in the Museum. Whether it be possible to guard against such deliberate and malignant treachery occurring as it does so rarely & so unexpectedly and perpetrated by wretches determined to accomplish their purpose — is a difficult question. But as I suppose it will be considered indispensable henceforward to increase the vigilance of the attendants and use some method to prevent direct contact with such precious relics and treasures as the collections abound with it strikes me that (if it be really impracticable to piece together the fragments) it would be well that they should be collected placed on a white marble table in the place where the vase stood with a glass shade over them, and immediately behind them there should be placed the best and most accurate copy or model of the vase which can be procured — and the Ensemble thus left open to public inspection without

DSI

further note a comment than a card inscribed
"Maliciously destroyed by a visitor Feb. 7. 1845"
placed among the fragments.

I think the following ends would be accomplished by this course.

1. The fragments & the pieces as vouchers for the state of ancient art — would be preserved and shewn.
2. Due respect would be paid to the noble Duke who presented the vase
3. The public indignation would be strongly kept alive against so villainous an act and perhaps to the point of rendering it personally dangerous to any visitor to shew [redacted] any intention to injure any thing
4. The public with such a memento before them would perceive and allow the necessity of precautions which might otherwise seem galling and vexatious

Whether you agree with me or not in respect of the particular suggestion which has presented itself to me I hope you will [redacted] me as a colleague in the Times (albeit an unworthy one) for humbly

yours

are with us, and continue to believe

My dear Sir Robt

Yours very truly

J F W Herschel

Collingwood

Feb. 10/45

P.S. — Wilfully and maliciously to destroy or deface works of art science or literature being Public property or tending to public instruction for the purpose of [redacted] instruction be if not already corporally punishable ought forthwith to be made so in the way most likely to deter — ie — by flogging.

Jon May 8th
Annual Report
Society — Astro

Dr Herschels
1821 Sends me the
of the London Astro.l
to propose me

Esq.
E. Pigott
Belvidere
Blackheath

Dear Sir, As I well know your fondness for Astronomy and the interest you continue to take in a Science to the progress of which you have your-self contributed, I thought it might not be disagreeable to you to receive the first Annual Report of an institution formed in London for the advancement of the Sciences, and now (as you will see by the List of its Members annexed) enu-merating among them a great multitude of the most eminent names. — Should you be inclined to see your own inserted in it, it will give great

pleasure both to my Father and myself to propose you.

Allow me, dear Sir, to take this opportunity in the name of all our circle to enquire after your health, of which it is long since any account has reached us, and to assure you of the kind remembrances of my Father and Mother, and of the respect with which I am

dear Sir
yours truly
J. F. W. Herschel

Slough May 8. 1821

DSI

HERSCHEL, JFW ALS 2-5-40

Sir J. F. W. Herschel

35
pt

My dear

Wheels and peacock
agree to the Hexadecimal and
the forms, looks, & use they
best Assist to the Archimedes
as not being magnetical sister
words to those of the words
of the Rectz apply. I see
Wheels' note of this may be
some new turn in adressing you

Ever yrs
J. F. W. Herschel

Hawk Feb 25/40.

150

Authority for
purchase of Lus.
for Breslau.

Requiem Telescopii Herscheliani Latinè Redditum

(From the Philosophia Insularum of T. I. M. Forster. Bruges. 1843)

Hic pater et mater, juvenes, natæque senesque
In telescopii, nocte micante tubo!
Hic lætâ insolitos faciamus voce sonores,
Dum novus annus adest, et vetus inde fugit.

Chorus

Lætus, Io! jam quisque canet mirisonoque canore
Echo per veterem concinet acta tubum.

Horrida lustra decem ridebat flamina cœli
Tempestas formam rumpere nulla potest
Ast ubi stelliferum porrexit in ardua truncum
Procumbit gelido machina grandis humo
(Chorus) Lætus, Io, &c.

Quot telescopio fulserunt sidera nocte,
Astraque mortali non numeranda manu
Inque cavo longo quot sunt miracula via!
Quae solùm omnipotens conspicit ipse Deus.
(Chorus) Laetus, Io! &c.

Hei mihi per noctem Pater observare solebat
Ante hominem facti lumina multa poli
Dum illi perpetuis, coelo revolubile gyris
Mulcebat vultum quisque planeta suum
(Chorus) Laetus, Io! &c.

Omnia tempus edax mordaci dente vorabit
Et sub Fortunae calcibus omne perit
Et quamvis facile inveniet non dentibus ipsis
Vera Gigantaeum pulveret hora tubum
(Chorus) Laetus, Io! &c.

Hoc frustra faciet: nam facta notata per illum
Dum vivit Cybele, vera videnda manent.
Jam novus annus adest. Vetus aura atque annus abibit,
Dii mittant pluvias, sole tepente, mines
(Chorus) Laetus Io! &c.

Tempore venturo Tos protegat omnia vobis

Eque tubo intactas fundat uterque preces

Ut placeat Divis multos revoluta per annos

Gens telescopico quæ canat orta choro!

Chorus

Lætus, Io! jam quisque canat, mimicoque canore

Echo per veterem concinat acta tubum.

T. F. Feb. 25. 1842

DSI

Requiem of the Forty-feet Reflector at Slough; sung on New year's eve 1839-40 by a family party of twelve persons assembled within its tube.

1.

In the old Telescope's tube we sit
And the shades of the past around us flit.
His requiem sing we with shout and din,
While the old year goes out, and the new comes in.

(Chorus)

Merrily, merrily let us all sing
And make the old Telescope rattle and ring!

2.

Full fifty years did he laugh at the storm
And the blast could not shake his majestic form.
Now prone he lies, where he once stood high
And searched the deep heav'n with his broad bright eye

(Chorus) Merrily, merrily &c.

3.

He hath stretched him quietly down at length
To bask in the Starlight his giant Strength
And time shall here a tough morsel find
For his Steel-devouring teeth to grind.
(Chorus.) — Merrily, merrily, &c

4.

He will grind it at last, as grind it he must
And it, brass and it, iron shall be clay and rust;
But Ratheless ages shall roll away
And nurture its fame in its form's decay.
(Chorus) Merrily, merrily, &c.

5

There are wonders no living wight hath seen
Which within this hollow have pictured been
Which mortal record can ne'er recal
And are known to him only who made them all.
(Chorus) — Merrily, merrily &c.

6.

Here watched our Father the wintry night,
And his gaze hath been fed with preAdamite light
While planets above him in mystic dance
Sent down on his toils a propitious glance
(Chorus) Merrily, merrily &c. —

7

The full deep Stars with approving gleams
Saw Sisterly Love outwake their beams
And marked her lamps unwearied burn
While their own grew pale in the morn's return.
(Chorus) Merrily, merrily &c.

8.

A new year dawns, and the old year's past.
God send it a happy one like the last.—
(A little more Sun and a little less rain*
To save us from cough and Rheumatic pain.)
(Chorus) Merrily, merrily &c

9

God grant that its end our groups may find
In love and in harmony fondly joined
And that some of us, fifty years hence once more
May make the Old Telescope's echoes roar.
(Chorus)
Merrily, merrily, let us all sing
And make the old Telescope rattle and ring.

J.F.W.H.

Dec 31. 1839

* The year 1840 proved the most drought
the recollection of the Author. (From the 20th
there was scarcely a cloudy day.

DSI

Requiem des 40-füssigen Teleskops in Deutschen übersetzt

(From No. 405 Astronomische Nachrichten)

Wir sitzen in alten Tubus gereiht
Und Schatten umziehn uns vergangener Zeit.
Sein Requiem singen wir schallend und klar
Indem uns verläßt und begrüßet ein Jahr.

Chor

Fröhlich und lustbewegt singet, O singt
Daß rasselnd der alte Tubus erklingt.

Wohl funfzig Jahr trotzt er der Stürme Gewalt
Nicht beugte der Nord seine hehre Gestalt.
Nun liegt er gesunken, wo hoch er einst stand
Das suchende Auge zum Himmel gewandt

(Chor) Fröhlich und lustbewegt &c &c

Die Wunder die lebendem Blick nie gestrahlt
Sie waren hier einst in dem Spiegel gemahlt
Nicht deutet, nicht zählt sie der ird'sche Verstand
Sie sind nur allein ihrem Schöpfer bekannt
(Cho.) Fröhlich und lustbewegt &c.

Hier wacht' unser Vater in einiger Nacht
Hier hat ihm vorweltlicher Lichtstrahl gelacht
Hier half ihm die Schwesterlieb' treulich und mild
Sie zogen vereint durch das Sternengefild
(Cho.) Fröhlich und lustbewegt &c.

Dann legt' er nieder, so sanft er gekonnt
Dass seine Kraft er im Sternenlicht sonnt;
Hier liegt er, ein harter Bissen, geweiht
Dem eisenverzehrenden Zahne der Zeit
(Cho.) Fröhlich und lustbewegt &c.

Sie wird ihn verzehren, ihr fällt er zum Raub
Und sein Eisen und Erz wird Rost sein und Staub
Doch ob auch Jahrhunderte rauschend vergehn
Sein Ruhm wird doch in den Trümmern bestehn
(Cho.) Fröhlich und lustbewegt &c.

Das alte Jahr scheidet, neu dämmert ein Jahr
Gott mach es so froh als das vorige war!
Um unsre Gesundheit mag gnädig verleihn
Er weniger Regen, mehr Sonnenschein.

(Chor) Fröhlich und Lustbewegt &c

Gott geb', wenn der Schluss dieses Jahres erscheint
Dass all' er uns treffe in Liebe vereint,
Dass funfzig Jahr später mit Segen bedeckt
Noch mancher von uns hier das Echo erweckt.

Chorus
Fröhlich und lustbewegt singet, Oh singt
Dass raschelnd der alte Tubus erklingt

Minna Städler, geb. Witte

Revise in Duplicate

MS file 252

Change the order of the Stanzas as indicated by the marginal numbers

The Herschelian Telescope Song.

Hymn of the Forty Feet Reflector at Slough,

To be sung on New Year's Eve, 1839-40, by ~~Papa, Mamma, Madame,~~ the whole family in ~~and all the bodies of~~ the Tube thereof assembled.

1

In the old Telescope's tube we sit,
And the shades of the past around us flit;
His requiem sing we with shout and with din,
While the old year goes out and the new ~~one~~ comes in.

(*Chorus of youths and virgins.*)

Merrily, merrily, let us all sing,
And make the old Telescope rattle and ring.

2

Full fifty years did he laugh at the storm,
And the blast could not shake his majestic form;
Now prone he lies where he once stood high,
And search'd the deep heavens with his broad bright eye.

Merrily, merrily, let us all sing,
And make the old Telescope rattle and ring.

There are wonders no living wight has seen,
Which within this hollow have pictured been,
Which mortal record can ne'er recall,
And are known to him only who made them all.

Merrily, merrily, let us all sing,
And make the old Telescope rattle and ring.

Here watched our father the wintry night,
And his gaze hath been fed with pre-Adamite light,
While planets above him in ~~circular~~ dance,
Sent down on his toils a propitious glance.

Merrily, merrily, let us all sing,
And make the old Telescope rattle and ring.

He has stretched him quietly down at length
To bask in the starlight his giant strength;
And time shall here a tough morsel find,
For his steel devouring teeth to grind.

Merrily, merrily, let us all sing,
And make the old Telescope rattle and ring.

He will grind it at last, as grind it he must,
And its brass and its iron be clay and dust;
But scathless ages shall roll away,
And nurture its frame in its form's decay.

Merrily, merrily, let us all sing,
And make the old Telescope rattle and ring.

A new year dawns, and the old year's past,
God send us a happy one like the last,
A little more sun, and a little less rain,
To save us from cough and rheumatic pain.

Merrily, merrily, let us all sing,
And make the old Telescope rattle and ring.

God grant that its end this group may find,
In love and in harmony fondly joined;
And that some of us fifty years hence once more
May make the old Telescope's echoes roar.

Chorus fortissimo.

Merrily, merrily, let us all sing,
And make the old Telescope rattle and ring.

SIR JOHN HERSCHEL.

The Finding of the Mastodon.

The words given—Polka, Mastodon, Aladdin, Frying-pan, Reflection, Avalanche, Volcano.

I TRAVELLED fast, I travelled far,
  And time and words would fail
If I should tell you all I saw,
  Nor would you trust my tale.

Some of the least miraculous things
  I'll venture to relate;
(I would not for the world be thought
  The least untruth to state).

In Susquehanna's swampy wilds
  A *Mastodon* I found,
His teeth and claws stuck up on high,
  His tail was underground.

Without a moment's loss of time
  I mounted on my prize,
Despite his high and ridgy chine,
  Despite his giant size.

Aladdin's lamp by chance I bore,
  Which from my pouch I drew
And rubbed. The Genius lent his aid,
  And (wonderful to view)—

Got him upon his legs again,
  (I kept my seat the while,)
Scraped off the dirt, and oiled his joints,
  And set him up in style.

Roused from ten thousand years of trance,
  The yawn he gave was frightful;
Quoth I, "*A Polka*" shalt thou dance,
  Which will be quite delightful.

A *Cyclop* furnished him with shoes,
  Each like a *Frying-pan*[a];
The Genius whipped him up behind,
  And thus our race began.

Forth like an *Avalanche* he rushed,
  And roared like a *Volcano*,
Which is a very dreadful roar,
  As all my hearers may know.

Loud clattered his bones as he galloped. Be sure
  No time was allowed for *Reflection;*
And I brought him, and bagged him, and lodged him secure
  In Sedgwick's Woodwardian Collection.

SIR JOHN HERSCHEL.

[a] See Scott's "Fair Maid of Perth," vol. i. chap. vii. p. 150. The coincidence was undesigned.

work you spoke of in a former letter, which I am very anxious indeed to see.

Believe me

Dear Sir

Yours very faithfully

J. W. Draper

Coleingwood Aug 18/43 51

Dear Sir

Many thanks for your note and the Specimens with which it is accompanied. Those done with "Percyanide of Ir[illegible] — Formo-benzoic acid and Nitrate of Silver" especially interest me as also the Platinum one. — The latter is now quite faded and I have especially remarked this property in the Iodinet of Platinum. Paper washed with the brown Iodinet is very sensitive and gives positive pictures, but they fade and with singular rapidity leaving the paper brown and sensitive as before. I have also obtained positive pictures with Chloride of Platinum over Acetate of Lead — but these are permanent. They are very feeble.

It is somewhat singular that in the very first note I have of any photographic Experiments, dated Jany. 29. 1839, in which the comparative sensitivities of the Carbonate, Acetate, Nitrate and Iodide of Silver are (rudely) stated I find the following, at the end of the days Entry —

T. O.

" Try 1. Benzoate
2. Ferrocyanate
3. Fulminate. "

If I mistake not you have on one occasion come very near to an im-
-Standaneous process by the use of the Fulminate of Silver. The ferro
-cyanic salts have in your hands also led to exceedingly beautiful prepara-tions — and it now appears that the benzoic acid is coming forward as a remark
-able photographic agent, in combination with Gold. It is scarce-
-ly to be [illegible] that the Gallic photographic — but one must not judge hastily. I have myself many — I think I may almost say most of the successful pre-
-liminary preparations from not varying the doses of the ingredi
-ents.

I think I mentioned to you a process by which an impression of exceeding intensity is impressed while remains invisible till breathed on or laid in a damp box.

I am still tantalized by near approaches to perfect success in my "amphitype process" but there is something still hidden at the bottom of the affair which plays at hiding-&-seek in a very strange & capricious manner.

I have however been lately doing very little in photography partly by reason of want of sun — but more on account of other pursuits requiring my whole time. — I hope you have not given up your intention of publishing the

Marschal
30 Juin 1864

Herschel (J. F. W.)

Callingwood
Jan 30/64

Dear Mons C'Abbe

I am very sorry that when I for-
-warded to you at your request, a
private copy of my paper on the weather
from "Good words" I was not aware made
of your intention to translate and
publish it in extenso in your "Annales"
in which you now inform me that
it will appear in the next Livraison
(which of course is already printed
off and probably by this time dis-
-tributed) For myself, of course I

Marsh. C'Abbé changes to C

I cannot but regard this as a high compliment. Had I been aware of such being the purpose for which it was required, I should not have thought it right to become personally instrumental in furnishing them with the original (with the Proprietors of "Good words" may take amiss) — though of course you could have had no difficulty in obtaining any bookseller the No. of that periodical in which it appeared.

I do not suppose there is much harm done, but Editors are apt to be sensitive in matters of the kind, and if such should be the case of course it will be necessary for me to explain the impression under which I acted — which was that you might very possibly think something in it worth noticing, or as farthest extract here and there a passage as a matter of scientific news

I remain

Dear Sir

Yours very truly

J. W. Herschel.

1/

Apartments of the Royal Society
Somerset House, London.
Aug 30. 1839

Dear Sir, and respected Colleague

At the risk of being considered importunate and relying on the importance of the subject, allow me to Enquire the fate, (if decided) of the application made by the Royal Society to the Institute, in favor of the Establishment of a Magnetic station at Algiers with a view to procuring a series of observations during the next 3 years in correspondence with those which will be made in that interval under the orders of our Government at Montreal, St Helena, the Cape, Van Diemans Land, and in the Antarctic seas and Islands — As also respecting the Creation of magnetic observations during their interval in Paris, having for their object the connexion of those distant observations with the Europeans ones already in activity

The Expedition, consisting of two Ships, the Erebus and the Terror, under command of Captn James C. Ross, has sailed some weeks. Captn Ross will M. Arago. Secretaire Perpetuel de l'Institut de France

touch at St Helena, the Cape, and V. Diemen's Land and will leave at those Stations, the officers and their assistants and apparatus respectively destined to remain there. Those destined for Montreal, sailed before, and must, ere this have reached their destination

Before the 1st of January there can be little doubt that the two observatories of Montreal and St Helena will be already in activity. Possibly also that at the Cape.

Each of these observatories is so Equipped, both as to its personal and material appointments that we may reckon on a series of observations continued at intervals of two hours during the night as well as the day, Sundays Excepted, during the whole period of 3 years in which they are to remain active They will also observe the Göttingen Terms, extending them however to all the 12 months, in place of restricting them to 4 in the year as is practised at present by the German observers. They will also execute a complete series of Meteorological observations Captain Ross, on his part will observe in correspondence with them whenever and wherever opportunity may offer in the progress of his Voyage.

The East India Company have provided for the Equipment of 3 similar observatories, supplied with precisely similar instruments and destined to

execute precisely similar observations at Madras, Bombay and at a Station in the Himalaya Mountains to be fixed on by the Indian Authorities — and Lord Auckland has been applied to to procure Establishments of a similar description at Aden (near the Entrance of the Red Sea) and at Singapore — and I have great hope that the application will prove successful.

Professor Lloyd, accompanied by Major Sabine, is at present engaged in organising, in conjunction with M. Kupffer the director of the Russian magnetic observatories and with Mess.rs Gauss & the most active associates of the German magnetic Society a system of corresponding European and Asiatic observation. And there can be no doubt that America will furnish its quota, in correspondence with Montreal. Already several observers have volunteered their services.

The great importance of a Station at Algiers in an Offensive combined operation of this nature must be too evident to need insisting on. Taken in conjunction with London, Paris, St Helena, & the Cape it forms an admirable link in a meridional chain of Stations, while, if viewed in connexion with Aden, Madras, Bombay & Singapore it would offer a no less advantageous disposition in longitude supposing that chain to be completed. May it

not therefore be permitted us to rely on the effective cooperation of the Institute in procuring from your Government the establishment of a regular magnetic observatory at that point, equipped on the same footing, furnished with the same or equivalent instruments, and destined to the execution of a series of observations coextensive and cotemporaneous with ours, — as well as a provision for a similar series of observations in Paris. — It is true, and we are well aware that delicate and precise determinations of the magnetic elements have emanated, and continue to emanate from the Royal Observatory — the results of your personal observation and that of M. Savary — and that occasional, and doubtless careful & precise determinations of these elements form part of your own desiderata in the Algerine territory and are probably already provided for. But what it is desired now to press on the attention of the Institute is, the important advantage which would accrue to Magnetic Science from seizing an opportunity such as <u>may probably never again occur</u> of fixing, for future ages

by a great combined and systematic effort, and so to speak, as a single blow, the magnetic data of the present epoch, upon a scale which may be said without exaggeration to embrace the whole globe and which shall spread over a period sufficiently long to give complete room for the elimination of all that is accidental and temporary in respect of mean results —— as well as of settling innumerable great questions which arise respecting those momentary fluctuations which agitate the needle as would seem, capriciously, and which may be associated to the waves of the sea or the irregular oscillations of the Barometer.

In order to accomplish this object in the completest manner, it cannot be requisite for me to insist on the necessity that all the observations (to be compared) should be strictly simultaneous each with each as well as that they should be coextemporaneous in their total duration and coextensive in their general plan, at every station, that they should be made with instruments as nearly similar as possible, and at least not inferior in excellence to those furnished

M. M. Arago. Sec. perpétuel de l'Institut de France

to the British observatories, and that they should embrace all the magnetic elements — in their absolute values — their annual and diurnal changes and their momentary fluctuations.

This undertaking, at any station, is beyond the power of an individual having any other occupation. It must form the regular and entire employment of a competent observer duly prepared by previous instruction and practice, and having under him assistants on whom he can depend

The staff of each of our observatories consists of four persons, viz: a principal (a Lieutenant of Artillery) and three assistants whose whole duty will be to execute the observations

The establishment of such an observatory at Algiers does, I confess, appear to me (and to my colleagues of the Meteorological and Physical Committees of the Royal Society, in whose name as well as in my own I have the honor to address these pages to you, and through you to the illustrious body with you are so long and so worthily identified) — an object of quite sufficient importance to interest the French

Government — a Government ever conspicuous in promoting those great scientific operations which conduce so eminently to the glory of nations — while the offence, as a national object is too trifling to be regarded: — widely different in this respect from those gigantic items of expenditure which have been met and provided for by both our Governments in the measurement of the figure & dimensions of the Earth — objects of hardly, if at all superior interest to the development of the laws of terrestrial magnetism.

As regards the observations desired at Paris — the annexed Report of the Council of the Royal Society to the Admiralty will put you in possession of the general design of the operation The object proposed to be attained by our application is to secure at least the observation in Paris, of the Göttingen terms, at 5-minutely intervals and for the three elements of Declination, and Horizontal and vertical intensity, and their extension to every month in the year or at least to such months as by concerted arrangement with the German observers shall so divide the labour as

to render it little onerous, and at the same time secure for Each monthly term corresponding observations at more than one European station By this System of procedure in three years, data will be accumulated fully competent to support any conclusion, that may be drawn from them. — (Of course a complete Series, how-ever would be most desirable.) — Of the means of attaining this object you will better judge on the spot than we can do — I mean as regards the personnel. — I would only suggest that if anything be resolved on the part of the Institute, there is no time to lose as the remainder of the year will be little enough to get the Instruments prepared & the Observers ap-pointed and instructed. By next April I presume all our Government observatories will be in full activity

Requesting your reply to the above
I have the honor to remain
with all possible consideration
and regard
my dear Sir & Colleague
Yours very sincerely
J. F. W. Herschel

President of the Physical & Meteorological Committee of the Royal Society

totally inverted by myself While I may be of some interest as matter of curiosity for then coloring is defective. In only one of them (No 9) is any silver used, and in that it is not and so produce the picture but only so under is visible after being withdrawn from the action of the light — somewhat in the manner of the Calotype of Mr Talbot, but without the employment of his Hyposulphite ingredient (Gallic acid) In No 1 & 7 the coloring ingredient is Iron. In No 2 (which should be viewed transparent) it is Mercury. In No 3, 4. it is the juice of the red poppy — and in Nos 5 and 6 it is Gold — Thus it appears that we have ample choice of Materials. —

The facility of the Gold preparation seems to me to be perfect — while so far as my experience goes — very far from being the case with any of the pictures sent me Either by Mr. Talbot or Mr Hunt- which are all more or less spoiled either by Exposure to light or by keeping in the Dark.

May I be permitted to remark on the Malleability of the eyes as a general character in the formation you have been so good as to send me

I remain Sir
Your very obt Servt
J. F. W. Herschel

DSI

Colingwood July 22/42

Sir J. Herschel presents his Compliments to Mr Collen and in reply to his Enquiry re- specting the Immense Lenses which, as he understood from the last authorities still preserved the reputation, even increased, which they attained during the life of M. Fraunhofer (In fact the greatest work of the Munich establishment the 15 inch Refractor of the Pulkowa Observatory has been commenced & finished since the Epoch of his death and M. Struve's Report of its performance is (by way of Vindication of the Honor of the Work) the old firm under the name of "the Optical Institute" of Munich was conducted by Fraunhofer and Utzschneider. After the death of the former Mr. U. became sole proprietor and in or about 1838 took into partnership M. Merz for the Optical department & M. Mahler for the Mechanical. I presume therefore that an order addressed to Herr von Utzschneider & Co or

or Mssrs Utzschneider & Merz

Optical Institute Munich will teach its destination and procure attention

If you consider [illegible] the mention of my name as recommending you to apply there will ~~[illegible]~~ be of use (as [illegible] it may) pray use it. But as I believe they have never laid aside the name of Fraunhofer & so probably Messrs U, F, Merz & Co may be the more regular address.

You should state very precisely the [illegible] for which you want the lens — the [illegible] and focal length* And if [illegible] adverse, do not be misled by what Messrs Daguerre, & others have stated about an Achromatic combination being needless for

* and its principal properties

you may rely on it that for precision & sharpness an Achromatic lens adjusted so as to unite precisely with one focus the whole spectrum if possible but on that cannot be hoped for, the especial rays E and I [illegible] in Fraunhofer's second picture of the spectrum or white will come nearly to the same focus the rays D and H — is what is really fit for photographic uses. On this subject there is much misconception and I may refer to a paragraph which has lately been running the round of the newspapers on the subject of the Claudet's process in which the "blue" and the "white" lights are stated to be the only efficient ones, so to shew how little the subject is understood by those who practise it as an art.

I beg to thank you for the very interesting specimen you have had the goodness to send me. — In return I have nothing of similar merit to offer — but enclose one or two specimens of common processes

Friday Eve
Mar 24/10

My dear Ci

I hope I have
Dear from Romance as
amused

Yours fy

Robbins

C. Stern

DSI

The final result has yet to be obtained, and I must remind you that we stand pledged to its continuance for another year at a similar cost. It is my duty to add that I consider the money admirably well bestowed. It is a first duty incumbent on us as a body to furnish encouragement to the utmost extent of our abilities to the industrious & meritorious observations.

Speaking as an Astronomer I must allude to another subject of Parkes congratulation — the appearance, within the year ~~elapsed~~ elapsed, of the fine Catalogue of 10000 Stars drawn up by Mr Baily and completed by Mr. Stratford under the auspices of this Association and at its sole and entire cost. No work more useful to Astronomy, or more acceptable to Astronomers could have been performed. I wish I were able to make a similar announcement with respect to the other two fine Catalogues, those of Lacaille and Lalande which the liberality of Government has supplied us with the means of producing but I cannot do so. I must say that the history of these catalogues is one of a singular and unexampled succession of melancholy events. Of the lamented deaths of Mr Baily and Professor Henderson while engaged in their ~~calculations~~ preparation we were not misfortune enough, I have now to record another death, that of Mr. Hanni ~~illegible~~ for whom under the Superintendence of Mr Stratford the work of finally preparing the sheets for press was committed — and subsequently the serious and continued illness of Mr Stratford himself brought on in fact mainly by over exertion and anxiety of mind consequent on this very work, and which has rendered it imperatively necessary to suspend the progress for the present. I trust however that a very few months will suffice to place them before the world.

Nearly contemporaneous with the appearance of the first of these works was the discovery of the new Planet Astrea. Let me indulge a hope that the announcement of the others ~~of any next~~ speedy advent will be accompanied with that of another denizen of our System whose movements have already been felt trembling along the line of our analytic ~~processes~~ [illegible]

90

The following Subscriptions have already been received :—

THE ROYAL IRISH ACADEMY, ... £50 0 0

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Reference on circ 2d Page magnetic storms (3)

And the Remarks I would further make — alternations & causes & diminutions of the have the hairs dark (compressed in a of the cause darker Hue of the Northern the vertical Component — and Legend Phen indicates is would appear that why ponderous a distant Can be sated — Today Landaus — for which they are worth — the Author considers that do all events they Explode the notion of the storm elucidation by Products by any elicited circle under action of the Sun in finding Definite Periods and rule or definite Magnetic in any Locality Phenomena — as regards the Seasons of the year in which the Storms occur, as distinguished from the Hours of the day in which they occur — as regards the Seasons of the day in a distinct relation to the position of the Sun — in other words they have a "Sole-Polar" character in these both "as to" frequency, magnitude, and simultaneity of waves — distribution" (Magnetic Storms of Sept 1/59 follow in well with this

and finally as is usual appear by their Intensity Hour of a Cyclone which passes centrally over any Place which consists in two wind currents in opposite directions on corresponding to one central barometric depression — Then Then is led to speculate on the possibility or the fact of the hypothesis of some kind of envelope or ocean of a certain "Magnetic" Ether coming from the Sun & surrounding Those with currents & Eddies corresponding to Cyclones in the air or Tides of the Sea in the Lea

J. F. W. Herschel Esq.

December Sixth

1850

Alan Ramsay Esqr
Spencer Place
Tynemouth

LONDON-W.C
3
MY
67

ONE PENNY

Sir Wm Herschel Bart &c

Collingwood

Hawkhurst

Kent

HAWKHURST
K
MY 5
64

USI

Sir John F.W. Herschell Bart F.R.S.

Collingwood

Hawkhurst

Kent

Report on
Hopkins's
Papers
on Glaciers

Herschel, Bt.,

Collingwood

Hawkhurst

Kent

LONDON
AU 29
6 PM

TUNBRIDGE WELLS
AU 29
6 PM

DS1

BRITISH RAINFALL.

Mr. G. J. SYMONS having been informed that a record of Rainfall is kept at Collingwood

and being about to compile his Annual Tables of British Rainfall (a copy of which is sent to each contributor), will be greatly obliged by Sir J. F. W. Herschel

having the Monthly Amounts of Rain during 186_, entered on one of the enclosed forms, and returned at an early date.

At Stations where two or more gauges are kept, the record of each is requested.

129, CAMDEN ROAD VILLAS, LONDON.

December, 186_.

Mr. Symons has sent by this post a copy of his tables for 1860 & 1861 which he hopes Sir John will do him the honor to accept.

DS

THE MEMBERS

OF

The Royal Astronomical Society Club

WILL DINE AT THE

FREEMASONS' TAVERN,

GREAT QUEEN STREET, LINCOLN'S INN FIELDS,

ON FRIDAY, THE 8th of April, 1864,

At Half-past Five o'Clock precisely.

WHEN THE FAVOR OF YOUR COMPANY IS REQUESTED.

DS

MSS; drafts; & Rough Copies

Pebbles' walk Hankin
Hopkins & Penton. MDH's c17

On Atoms. Delagoue / Hannay
Crum & Harrison

Photographia Jour. on Tennants'
blue Prisms & Dr Monckhoven's

Report on Hopkins's Glacier paper

Report on Airy's 2d Paper on Mag
repeated - Jany. 1864. RS

Letter to Abbé Matteo on Spectro-
scope prisms.

Copy of Speech at Leeds 1858

Report on Hennessy's Paper
on Spontaneous Division of
Temperature

Report on Stokes Paper
on Solar Physics

Letter to Edr of Intell Obr. Sept 9/65 on Suspension 70 of 8
Lett. to Photog N. on Uranium Oct 22/64
Brit Assoc at Southampton Physical Sections Rep

a crack, a crack Phenomena Related; a crack with origin under water place, — how a crack can proceed from a Tendency to Rupture, for the plain reason that at the boundary limit the dividend force on the molecules close to the limit is counterbalanced only by half the cohesive force which existed when there was no crack — viz by the cohesion only of the surrounded portion — But if
a crack by whatever produced be stopped from running by Encountering a solid portion of greater Cohesive force than the ~~surrounding~~ portions with no Crack be determined by the accidental deficiency of Cohesion at some weak point, but by the average resistance of the whole Complex Mass.

It would be interesting to Prove & determine, on the Homogeneous partition of Glacier ice whether by Polarised Light applied to ~~the~~ polarised Light whether a definite Crystalline Structure prevails: it would, and if so in what did Individuals differ in relation to the apparent Laws of Fracture — and in Ice Crystals only by the ~~Structure~~ Structure

On Her Majestys Service

Sir John F. W. Herschel Bart.
Master & Worker
&c &c &c
Her Majestys Mint.
London

MSS
Published Works

Copy of Sir John Herschel's Speech. Sept 30/58

From the Leeds Mercury

Sir Jno. Herschel who was rec^d with great enthusiasm. He said that when he was invited to attend that meeting he understood that he should be called upon to distribute the prizes for astronomy to those young men who had distinguished themselves by their attainments in that science in the Society of Arts examinations. That arrangement having been properly altered & the prizes being considered as distributed, he felt himself at liberty to choose the ground upon which he should address the meeting (Hear-Hear) As a member of the Society of Arts. His opinion was requested as to the system of exam^n & he gave it most cordially in favor of the proposed scheme, & he stood there, therefore not merely as a casual visitor, but as one having some more special interest, at least in one part of their proceedings. (Hear. Hear) As a member of the Society of Arts. he must, in the first instance, express his gratification at the well-working of the system in this particular instance & in the next place, he thought he ought to congratulate the Leeds Young Mens Christian Ass^n upon the success achieved by several of its pupils in the exam^n (Hear. Hear) With these remarks he might proceed, but he should confine his observations to the general testimony which science bore in favor of religion (Hear. Hear), a testimony which, speaking ~~speaking~~ & in the name of science, he had never been backward to give. & which he should never shrink, either on that or any other occasion, from giving. but he should better serve the objects of the institution & the cause which is common with them. He had, at heart, if he stood there in the position which had been accorded to him as an astronomer & offered some words of encouragement

(over)

to those young men who had particularly distinguished themselves in that particular branch of science with which he was more particularly acquainted (Hear. Hear.) Addressing himself in the first instance, to those young men who had achieved distinction in this particular dep[t] of knowledge. He would say that they had placed their foot upon the first round of a ladder — a ladder which was not only lofty but of high aspiration & which might conduct them to worldly success, or which might not. but that was a matter only under the cognisance of Providence. (Hear. Hear.) He would recommend them not to look upon it in that light — but, as a ladder leading to higher & greater results — to the achievement of that true personal greatness — which independent of worldly success, was only to be achieved by prolonged & determined self-culture — (Hear. Hear.) But if in the progress of youth, their ascent of the ladder led them to a conspicuous position in the world's eye, the manner in which they made their first upward step would never be forgotten but would enhance the value of all they did hereafter. (Applause.) He[r]. if permitted to go more specially into the science of astronomy; on which he was the best competent to speak. he call their attention to the words of a grand old Latin poet —

"Hunc solem et stellas et decedentia certis
Tempora annotinis - sunt, qui formidine nulla
Imbuta spectant —

(P.T.O)

Were ever persons so obtuse, persons of such a town of mind that the stars & the grand moments of the universe were looked upon with (ignorant gaze & stupidity) [illegible] reciting neither the sense of, nor the idea of [illegible] He hoped & trusted that none present belonged to that class — (Hear. Hear.) Speaking for himself he had long felt that there was a very pregnant meaning & great suggestive power contained in those noble words — (Hear. Hear). When they looked upon physical science, they saw it was in the highest degree minute searching into the secrets of nature wherever they were to be traced. They found themselves involved in a labyrinth of most marvellous but glorious relations, which pressed upon them from all sides & almost took their breath — They knew not where to turn & were bewildered in the variety of the study, but he had felt it a relief to leave off that enormous pressure of wonder & admiration & lift his eyes to that blue celestial vault, & drink in the simple grandeur, glory & majesty which the facts of astronomy revealed to them (Applause.) Take for instance the first two words of the passage he had quoted — "Hunc solem

(P.T.O)

Now few before him had any adequate ideas
of that wonderful orb. They who by their studies
in the science of astronomy, had gained some knowledge
of the subject, were enabled perhaps to tell them the
magnitude of the sun & to say how many thousands
of miles it was in diameter, but what conception did
that give them of that wonderful body
Then look at the moon. see her circling in her vast
orbit so vast that though two thousand & odd
miles in diameter, she looked to them like a very small
object Then let them conceive of a globe filling
the whole of that immense circle & projecting on all
sides to an equal distance beyond it such a globe
was the sun Further let them imagine that
upon every square yard of the surface of that
enormous globe, they had a fire burning, day &
night - equal to the supply of a steam engine of
6.000 horse power & there was the sun, doing
its office of warming, enlightening & cherishing
the planetary system to which they belonged
Was there no religion in that vision "Applause"
Who amongst them would not acknowledge the
tremendous feeling which must pervade all
thoughtfull minds on offending a Being
who wielded such energies & who might in an instant
instead of permitting the sun to warm them
all on, it to burn them to ashes (Hear. Hear)
He then came to the next part of his quotation
"et stellas" the stars. The young Lecturer present who had paid
any attention to the principles of astronomy, knew
very well that amongst the stars in space there were
many that in all probability transcended the
magnitude of the sun whilst their number
was innumerable; & they knew also that whilst
observing these myriads of stars, they could only
reach the verge of that vast expanse of creative
power, being lost in admiration at its over-
whelming force Applause. Then to
resume his quotation, think of the awful and
overwhelming idea conveyed in the words
"Decedentia certis
Tempora momentis"
that silent fated eternal irrevocable lapse of those
moments which measured not only the astronomical
phenomena of the universe, but the life of man
& even of mind itself & of those things which enter
into their moral feelings that lapse of
passing moment, descending grain after grain
(over)

& sand, corn after sand, corn. of which so few were
given to them in this world. but those few
precious in their value & heavy with their
illimitable responsibility. passing away whilst they
were dreaming, or perhaps, doing something worse
than dreaming (Hear Hear) What was the
lesson he should endeavour to draw from this
that they should endeavour, ere to appreciate
the capacities with which they had been gifted
by which they were capable of rising to the
contemplation of those marvellous grandeurs
Do what their English Poet had so sub-
limely figured forth

"Enter the sacred temple of thy breast
And gaze & wonder there a ravished guest

And finding there those faculties & feelings, those
high aspirations, let them beware how they
desecrated such aspirations by the admission
of any unworthy thought or impure desire

Clever.

He had dwelt so long upon the physical
constitution of the great elements of their planet-
ary system — that he would not trespass much
longer upon their attention. but he might direct
the attention of those who heard him to the love-
liness. the beauty & the kindness which surrounded
them at every step — to the all wise benevol-
ence of which every foot in creation bore testimony
& he might ask them in the same spirit to think
if it be fearful to offend & Ruler who
wielded such power, how dreadful should also
be the remorse to a well conditioned mind
consequent on grieving a benefactor to whose love
they owed so much & who manifested such care
over them (Hear Hear) If in the former
view. there was religion in this there was
piety (Hear Hear) He should however
be stepping out his place were to dwell on that
subject & preach a sermon).

P.T.O.

& I would conclude therefor by moving

"That this meeting recognise with pleasure the efforts so successfully made in the Young Mens Christian Association to unite the cultivation of science & literature with the nourishment of true virtue & spiritual religion

"Applause"

Lied. May 11/65

DSI

DSI

DSI

Stamps
wickens for
return postage

THE ROYAL SOCIETY,

BURLINGTON HOUSE, LONDON, W.

20 Feb 1865

SIR,

I am directed to send you the accompanying

2 Paper~~s~~ Researches on Solar Physics Series 1 and 2 By Dupn

W. Ch Rue, Stewart, and Loewy

and to request that you will favour the COMMITTEE OF PAPERS with your opinion as regards ~~its~~ their eligibility for publication in the Philosophical Transactions.

The Committee hope that you will be able to examine the Paper~~s~~ sufficiently for the purpose within a month from the present date; if, however, your engagements prevent, I should feel obliged by an intimation to that effect.

I remain,

Sir,

Your obedient Servant,

G. G. Stokes

Secretary R. S.

Sir John F. W. Herschel Bart

DS

(RS)

Report on Two papers by Messrs Delaune, Steward, and Lacey on Solar Physics. Read. Jan 26. and Feb. 2. 1865

Referred to Mr J. Herschel

1st Paper — or "1st Series"

There cannot be a doubt as to the value of this paper or as to the propriety of printing it; either in ~~Extenso~~ or with some condensations, or curtailments & the modifications of details in the Phil. Trans. for the year. It exhibits, besides a ~~historical~~ brief resumé of the history of the progress of Solar discovery (on which the reference alone to 20 comment) the results of what may be termed a statistical summary of the preponderance of evidence pro & con on the following principal questions. viz: 1st Whether the dark portion or what is commonly called the "umbra" of a solar spot is, or is not below the level of the bright surface, or "photosphere" of the Sun. — 2d Whether the ~~facules are elevated above~~ ~~the general level — and if so and are~~ ~~belong to the second position, whether~~ the facules stand in any, and in what

2) apparent physical relation to the Spots
at least in respect of Situation — a question
which the Authors appear to consider as bound
up with and involving the question whether
the Photosphere itself consists of solid, liquid,
or vaporous or cloudy, materials, an
opinion in which I cannot agree, for reasons
presently to be adduced.

To afford answers to these questions, the
whole series of ~~Dr Lassell's~~ Observations ~~and Mean~~ made
with the Keen Heliograph have been resorted
to and examined seriatim, and their
results grouped in Tables in which the
features favorable to either alternative
in Each question are separated from
Each other in Columns so as to afford
separately, answers ~~to one & the other~~
affirmative of one or the other — i.e. in
all such cases as do in Fact exhibit a
preponderance on one side or the other in
the appearance or Nearness to the Spots:
which done, the question is held to be de-
-cided one way or other, on the showing
of a simple Enumeration of the opposing
cases.

In both of ~~the first two~~ these questions, as
have stated, The final reply on a balance
of the answers pro and con, is largely
in the affirmative. As to the first —
Both from the Evidence of the apparent
breadths of the penumbræ at its opposite
Edges, in Longitude, and in Latitude, it
results that the nucleus of a Spot is at
a lower Level than the General Photo-
-sphere — in other words that the Penum-
-bra is in the nature of a pit with
Shelving sides Shelving inwards —
and II. As to the Facules. Their General
Elevation of Level being concluded mainly, and no doubt Satisfactorily, from
their greater visibility near the borders
of the Sun than in the middle: — the
affirmation of
their physical connexion with the
Spots results from the alternative
Comparison of cases in which they
lie to the apparent left, to the
apparent right, a circumstance highly remarkable
The result being this conclusion — that there is a very
decided preponderance of Evidence
to a situation to the apparent
left of the Spot a proof to which they
seem
Lead.

From this relation of Faculæ to Spots the
Authors consider themselves entitled to
conclude — 1.st That the matter of they consist of

4) Hadn
ial removed from the area occupied
by the Spot. 2 That this removal
(generally speaking) is in the nature of
upheaval accompanied with relative
lateral movement and 3 That this
Relative lateral movement or drift
indicates a less angular velocity of rota-
-tion of the upheaved material in its
new situation than in its former — which
they seem disposed to account for by its
increased distance from the axis of rotation
and 4 That therefore the material of
the photosphere or the "luminous matter"
"is not to be viewed as composed of heavy
"solid or liquid matter, but is rather
"in the nature of a vapour or cloud"
[MS. p. 17].

To the three first of these conclusions I
am not going to raise any objection, though
I am inclined to regard the greater part
of the solar granules as being in the nature
of vast undulations propagated along
the level strata of the medium in which
the photosphere floats — a view by no
means incompatible with extensive la-
-teral displacement and consequent
thickening of some portions of that film

But on the last I may perhaps be per-
mitted a remark or two.

A cloud, in the sense in which we use the
term consists of solid or liquid matter (ice or
water in the form of crystals or drops) formed
from the condensation of a vapour (an invi-
sible & transparent gaseous body) not floating
but sinking in a gaseous medium of vastly
less specific gravity than itself: sinking however, with a
extreme slowness, owing to the minuteness of
its particles, and consequent (relatively) enor-
mous resistance of the air. The

The consideration of Cagniard de la Tours
experiments however on the vaporization of
liquids under high pressure, leads, as I have
shown in my Essay on the Solar Spots (published
in April 1864 in the Recorder of Science) to a totally different view of the
constitution of the Solar transparent envelope
from the atmospheric conditions which
we observe here on earth. There,
in consequence of the intense heat and (in the
lower regions) the enormous pressure, the
definite
line of demarcation between the liquid
and gaseous or vaporous states of matter
probably exists, but a gradual decrease of
density from the surface of the solid nucleus
(if there be such) to the highest region, far
beyond the photosphere, up to that of the rare-
-fied and beyond the
coloured protuberances. There is nothing
then to prevent the aggregation within

b) the boson of this envelope, either by crystallization, or by chemical aggregation, of bonâ fide solid matter, of a high degree of fixity, and in masses or so to speak of gigantic soot-flakes, of any form and magnitude, which when formed shall settle down to such a level as corresponds to their density and there ~~to~~ ~~float~~ rest in equilibrio in a fluid of their own specific gravity. These solid masses or flakes, being maintained at ~~the~~ intensely high temperature of the surrounding and sustaining ~~liquid~~ fluid would radiate light in abundance, which the ramified ~~liquid~~ fluid around them would not do: and would so give ~~us~~ to all the phenomena of the photosphere, which yet they could by no means be assimilated to the clouds of our atmosphere which maintain their level solely by the ~~resistance~~ mindedness of their particles and consequent resistance of the surrounding medium — ~~not by its equal~~ sustained at, or nearly at, a definite ~~level~~ they would go along with the undulations of their level-surface which, as may be observed in a vessel filled with a liquid of gradually decreasing specific gravity, a saline solution for ex ample, in which glass particles properly adjusted as to specific gravity are held in suspension, are very much more deeper and slower of propagation (for obvious reasons) than the waves which run along the surface of a homogeneous liquid. The mere movements of the particles of the photosphere can decide nothing as to their state of aggregation, whether solid or liquid. Be they what they ~~may~~ they must obey the motion of the transparent medium in which they are sustained, as duck weed might do on a pond covered to a certain depth with oil ~~&~~ ruffled by spring current

I am far from suggesting that these remarks should be placed before the readers of the Annals with any view to their altering, modifying, or even reconsidering the passage referred to. But I am desirous to place on record, in their report, that they entirely dissent from it as above stated as well as the fact that such views have been entertained by myself and made public in the publication of a late interesting paper by M. Faye read to the French Institute in the month of January last.

It is otherwise with respect to a passage in the M.S.p. 10. on the correction due, as the author considers, to aberration. I presume that when they have reconsidered their point with reference to the received explanation of the phenomenon of aberration on the undulatory hypothesis of the propagation of light, they

wide reading admit that no such correction as is there suggested can be admitted, on the score of aberration. The Equation of light it is true is different for a point on the limit of the Sun and the ~~the~~ different Center, because the light requires more of time to reach the eye from the former than the latter, in which time the Sun's apparent annual motion carries it over about $\frac{1}{12}$ of a second of space, by which the whole spot and all its appendages would appear displaced with reference to the true center of the Sun, or which comes to the same thing, by which the apparent center of the Sun's disc differs from the real one. But this has nothing to do with the direction of travel of the spot whether forward the Eye or at right angles. of which on the undulatory hypothesis the aberration is independent.

The Tables which accompany [illegible]

Memoir. 2. a "Second Series"

On this second Series I have little to remark The preponderance of evidence drawn from the aberration both of Jupiter & Saturn on the mechanism of Watt in reference to breaking out, increase, or diminution, to the left or right of the Center — as favoring the idea of Solar influence, does not seem to be very striking a conclusion. Still it is something to have found that on such a very large number of observations, some material amount of such preponderance does exist.

In this view I should recommend the memoir for printing — if only to direct attention to the point, and to the mode of procedure — the more especially as the influence of Venus is thus brought into prominent relief — a point, if verified, of the utmost importance.

Tables

The Tables and Tabulated Statements which accompany these Papers are very voluminous, and as, their purpose once served (that of supporting the theoretical conclusions & reasonings) it is not likely that they will become matter of very frequent subsequent reference it seems desirable that if possible they should be so arranged as to occupy as little space. This I think they might easily be so rearranged as to do and the rearrangement might, I think be done during the printing without recopying them for instance in the Tables accompanying the 1st Series. Table I might be materially ~~diminished~~ reduced in bulk ~~by the removal of the useless~~ of printed paper occupied by dispensing with the accompanying pattern Tables headed "Table I. Suggested arrangement" probably to the extent of one half its present bulk. ~~By the arrangement marked~~ "~~Table II a suggested arrangement~~"

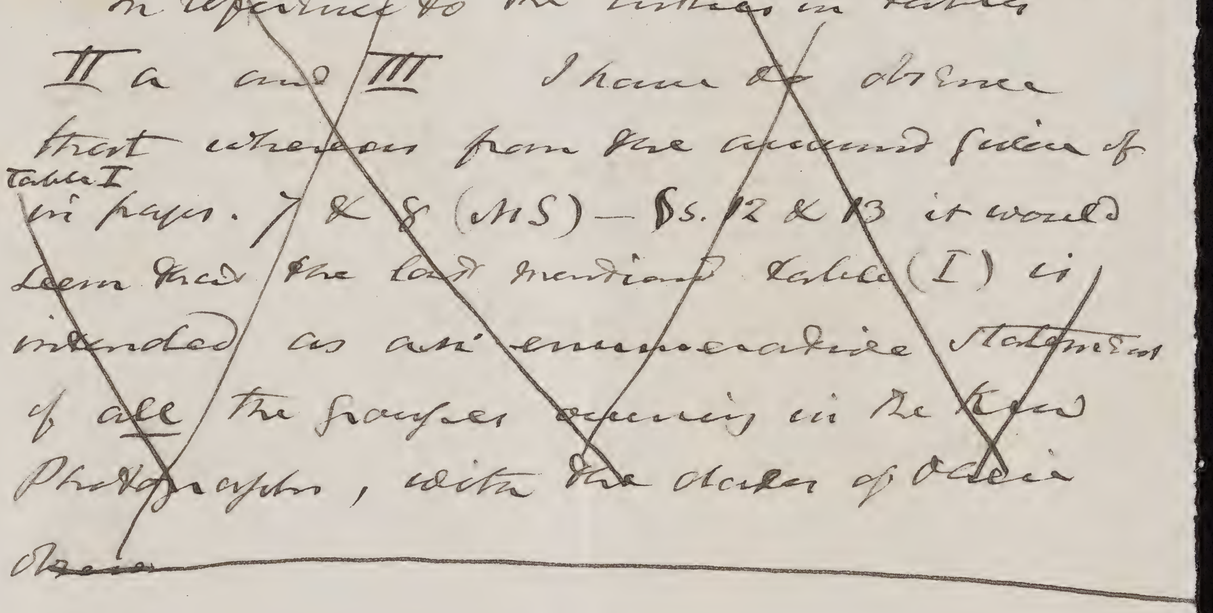
Table II a might be greatly abbreviated

without any sacrifice, as it appears to me of clearness by breaking it up into six separate tables, and by so their respective headings, (which would admit of considerable abbreviation) so as for each series of entries to occupy the whales, instead of a very much proportion of their respective columns. This, with the suppression of the Column headed No in Kew Catalogue in which no single entry occurs, would diminish the extent of this table by at least one half or more probably by two thirds.

And lastly, a similar redistribution of Table III with a similar suppression of the last named Column would reduce the amount of printed space occupied to little more than two fifths of its extent if arranged as at present.

The tables accompanying Part 2. Memoir though voluminous in appearance being letter press would be much compressed in printing & do not appear susceptible of abbreviation.

In reference to the Entries in tables II a and III I have to observe that whereas from the appended index of Table I in pages 7 & 8 (MS) — §s. 12 & 13 it would seem that the last mentioned table (I) is intended as an enumerative statement of all the species occurring in the Kew Photographs, while the dates of others



Report on Defense Purposes in Solar Physics

Sent in March 1965

DSI

Mons L'abbé Maigno. 2e 2 Rue
d'Erfurth ~~Le Paris~~
Le Paris

Collingwood
July 18/63

Mon cher Mons l'Abbé

Par un singulier coincidence
il m'arrivait aujourd'hui, justement d'avoir écrit sur papier la combinaison des prismes ci jointe marquée A, pour un spectroscope sans déviation et sans déplacement latéral du rayon refracté hors de la ligne même de sa première direction, lorsqu'en ouvrant votre numéro "des Mondes" que vous avez eu la complaisance de m'envoyer - pour la semaine passée, voila, / la première chose sur laquelle tombaient mes yeux, c'était l'ingénieux arrangement de M. Valz - qui accomplit parfaitement bien. la première de ces conditions mais non pas la seconde.

DSI

Dans cette combinaison de Prismes (A) les deux prismes, b, c, qui dispersent le rayon, sont de flint glass - d'un tel angle refringeant qui suffit pour donner une deviation de 45°; en sorte que, deux refractions detournent le rayon 90° de sa direction primitive - ainsi disposées, il est facile à voir qu'après avoir subi reflexion totale sur la base du prisme rectangulaire a et deux refractions par b & c, il reprendra sa direction primitive, après laquelle, deux reflexions interieures sur les surfaces laterales du rhomboides d / dont les angles aigües sont chacun de 45°, / le ramènent à une coincidence parfaite avec le rayon incident -

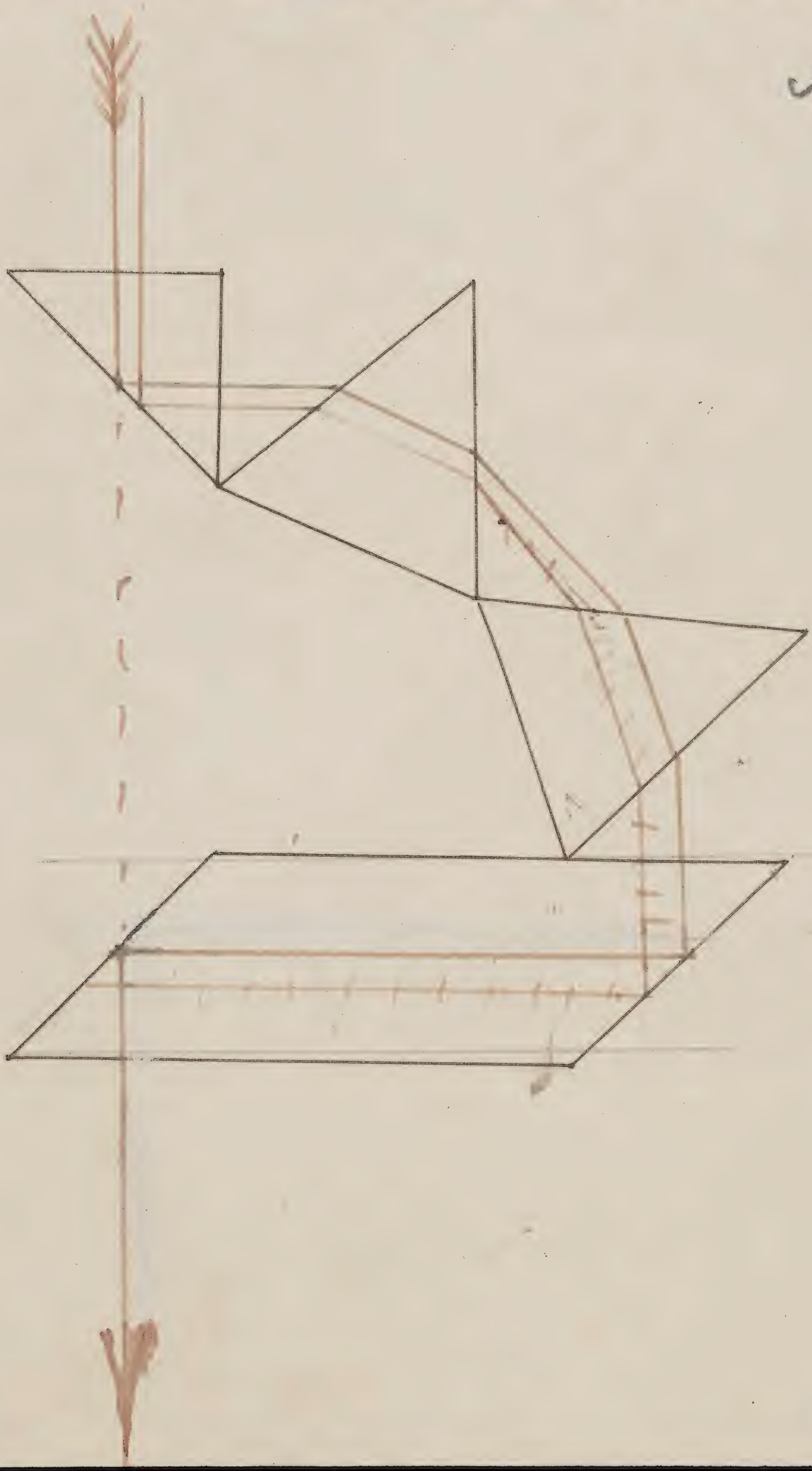
Pour cela, si l'on adopte le coefficient de refraction 1.70 = μ de M. Valz. l'angle refringent des prismes doit être de 52° 30' - ce qui donnera déjà une assez grande dispersion - Mais, si l'on en veut une encore plus grande, on pourra employer, au lieu combinaison B de quatre prismes ayant chacun ce même angle refringent de 52° 30', ou la combinaison C avec trois prismes egaux latéraux, b, c, d pour disperser les rayons & deux autres, à, rectangulaire isocèle, l'autre, e, isocèle aussi mais dont l'angle au sommet soit de 78° 40', placé de sorte que le rayon en sortant du premier prisme d tombe perpendiculairement sur sa première surface -

Au reste les figures s'expliquent d'elles mêmes -

Agreez Mons. l'abbe etc

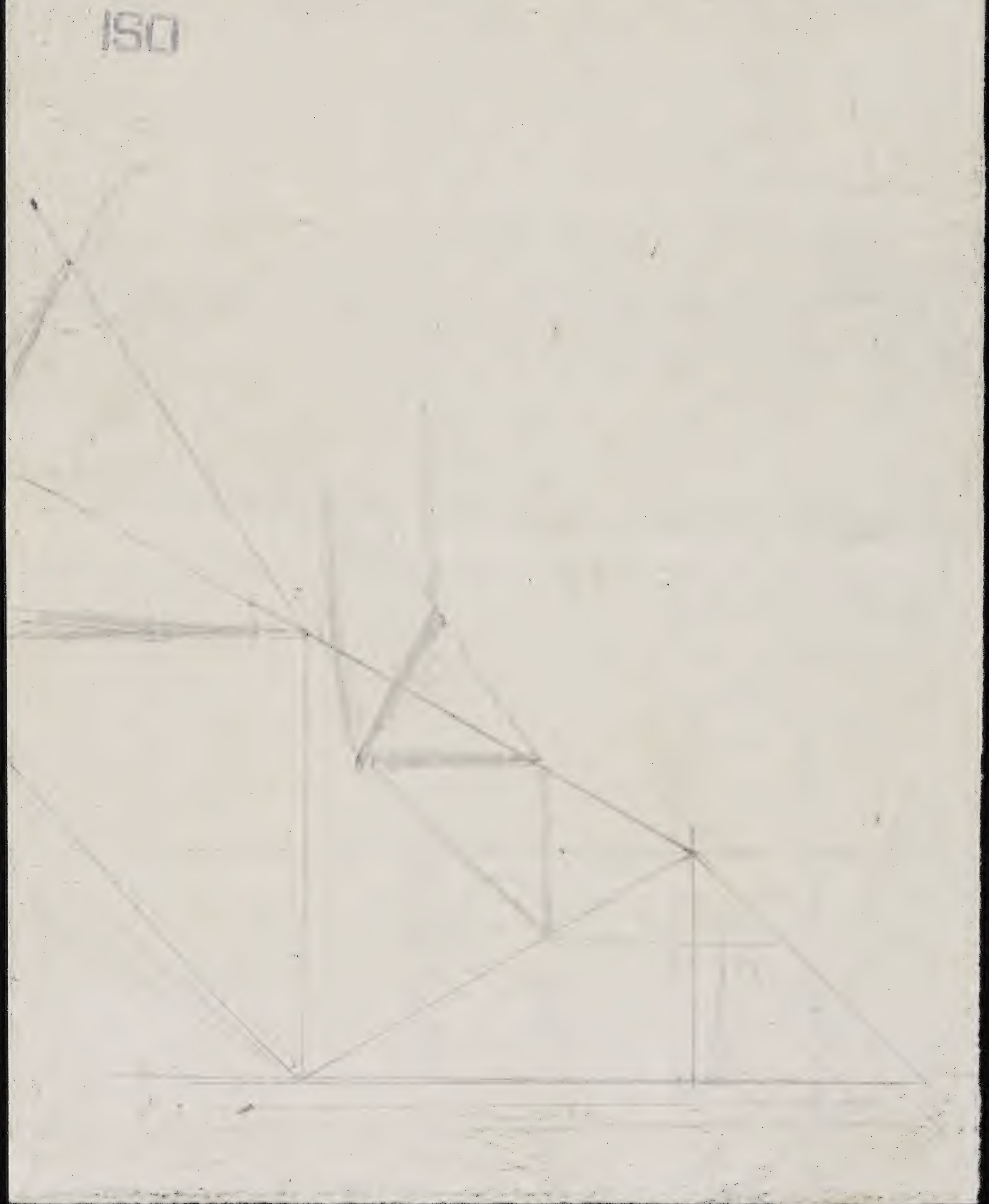
J. F. W. Herschel -

A



B

ISO



C

DSI

cyclone when passing centrally, or nearly so, over a given spot; which consists in two wind currents in opposite directions as corresponding to one central barometric depression, the Author is led to speculate on the possibility (a to put forth the hypothesis) of a kind of Envelope or Ocean of a certain "Magnetic Ether" covering the Earth, and susceptible of being thrown into Eddies analogous to cyclones in the air, or tide whirlpools in the Sea, as the cause of the Imagnetic Storms. Valeat Quantum. From so high an authority we receive any suggestion with gratitude. Nothing can shew more clearly the exceeding difficulty of the interpretation of the magnetic phenomena than that such ~~a~~ hypothesis should be put forward as offering a chance of explanation. A difficulty in Science seems to be Part of Some any conception of the Mode of Action of such an Ether or a Magnet.

DS

has supplied in Lawrence observers will
possibly attention & which no doubt receive
further development from the latter

Regarded as an elaborate dissertation
of a long series of observations carried on
with every appliance & means at the com-
mand of a practical Astronomer, as well as
being the ~~Compilation of~~ necessary supple-
ment to the General discussion commenced
in the former Memoir there can be no
doubt as to the propriety of printing this
Paper as part of the Philosophical Transac-
tions for the year. It contains a great deal
of valuable work, but no more than is
absolutely indispensable for placing
before the reader the final data of
observation in their most compressed
form, ~~and~~ enabling him to judge of the
validity of the conclusions arrived at, &
putting him in possession of the means of
forming, them according to any views he
may be led to form for himself.
I therefore cordially recommend them
to be so printed.

J. W. Herschel

From Weymberg.

I am Sir
Your humble
Servt.

"My dear Sir
Your valuable & welcome letter
dated ~~July 15~~ Weymberg July 7 1834
&c &c &c ..... (Signed) Jas Hornberghe

Sir J. F. Herschel Weymberg Cape Town
Cape of Good Hope

P.S. The Roof proposed being light & great
strength of Cable would not be required
~~a wire rope like that~~ ~~would be~~
Rope at
a Span of 600 feet Rope
(Rail suspended the 600 suspension bridge
over the Rhone
at Valence would answer my purpose
and be very cheap.

Copy letter to Editor accordingly. Collgwd Hawkhurst Kent Oct 9/65

Sir If you think the annexed worth inserting in
your "miscellaneous Answers" I should like to see
proofs of the letter before & engraving a wood cut
Also to be furnished with 50 Copies (of
course begin for them)

If you wish to see the original sketch
I will send it you — and I must pardon
early request of return in a registered letter
Your obt Servt
Privately J. F. W. Herschel
The Editor of the Intellectual Observer

— Blade Inn
54. Camden
Camden Town
And on NW

Queen
Collingwood

Sept ~~25~~ 3. 1865

To the Editor of the Intellectual Observer

Sir. In your No. for ~~March~~ September
~~March~~ I observe the following
notice under your "Miscellaneous"
~~Article~~ heading
"Roofs on the principle of Suspension
bridges. M. Lehaitre a French civil
Engineer, proposes to construct roofs
having a span very far greater than
any hitherto attempted, by supporting
them with suspension cables. They will
have an advantage over suspension
bridges in being free from the injurious
effects produced by varying loads."

Allow me, in the absence of any further
knowledge of M. Lehaitre's suggestion, to
submit for your inspection ~~the~~ the exact
facsimile of a rude sketch of a plan for
constructing a hall 600 feet in length
400 in breadth and 200 in height

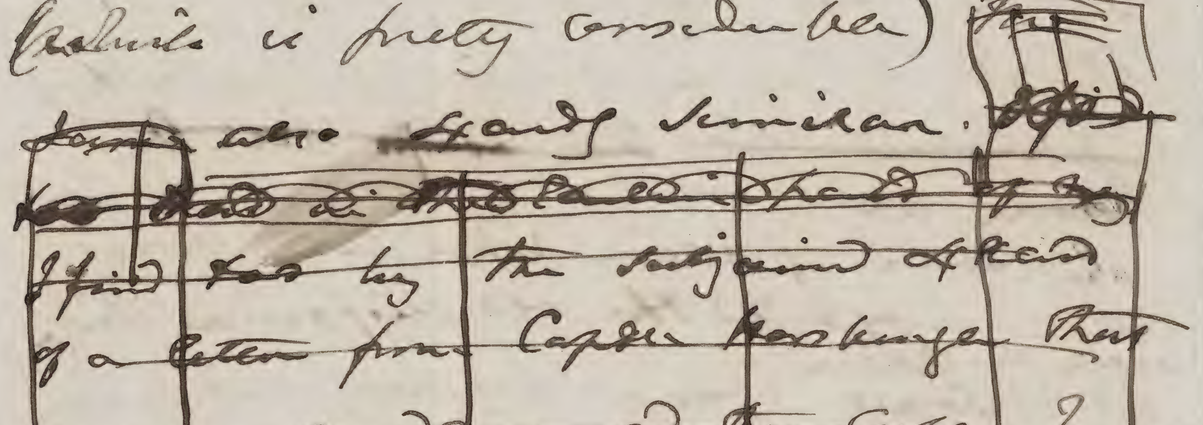
X (and if you think proper, for that of your readers
through the medium of a wood-cut)

DS!

~~which I find preserved among Kopia papers, "Memorandum" of~~ ~~a memorandum~~ of a very old date and which I believe to have been made during my residence at the Cape or not long after, ~~from the blank of the~~ ink, ~~from a memorandum~~ (some of ~~it~~) written on the paper, and with all of ~~some~~ a date ~~it bears~~ (which however ~~cannot be that of~~ on which it was made, as on ~~reference to the journal~~ I find that I was not on that day at Klipplaagt)

which I find preserved among some papers of a very old date, and which I am unable to explain as to precise date I cannot ~~refer~~ refer to a ~~memorandum~~ later Journal than 1840

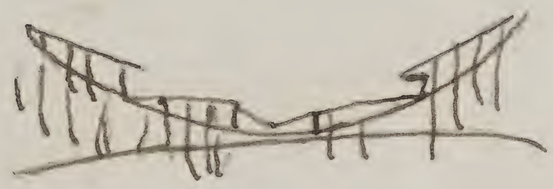
While I find preserved among ~~some~~ papers of a very old date ~~& which I believe to have been made during my residence at the Cape or not long after, from the blank of the ink, from a memorandum (some of it) written on the paper, and with all of some a date it bears (which however cannot be that of on which it was made, as on reference to the journal I find that I was not on that day at Klipplaagt)~~ my papers and which if the date I mean be (as I have no doubt it is) that of this document — possibly this may do years for the lapse of time. The hand writing is the same with that of the other memoranda on the paper and the discoloration of the ink (which is pretty considerable)

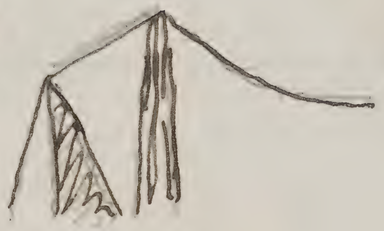


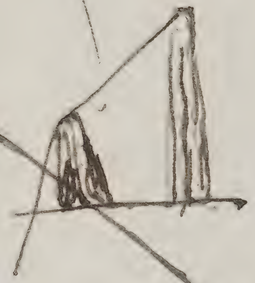
~~some~~ also ~~nearly~~ similar. ~~Added~~ ~~I found it related that I had by~~ I find was by the subjoined ~~A~~ Read of a letter from Capt. Kerchaye ~~that~~ during my residence at the Cape. I turning up the sketch for first I had some doubts ~~what~~ on this point, my habit of dating during the latter part of my residence being "Field Lawson" (the name of my residence, an intended home near Klipplaagt) but from the subjoined Read of a letter from Capt. Kerchaye I find that I was accurately also in the habit of dating

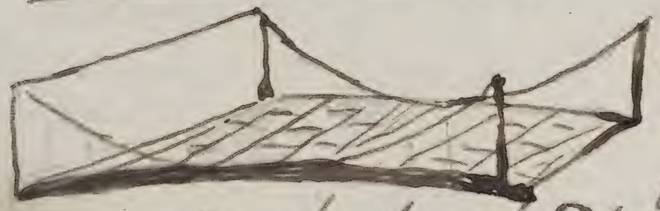
This is the original

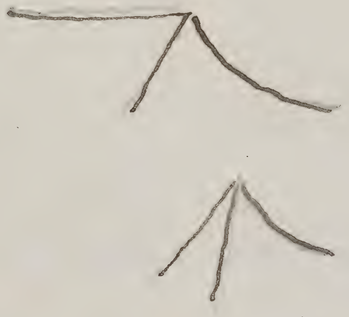
Length 600 feet
Breadth 400 Height 200











Roof of sheet Iron ribbed together & lightly cylindrical

Report on a Paper by Mr Capt R.
1st Analysis of 177 Magnetic Storms.

This Paper is to be considered as supplementary to those by Mr Airy in Phil. Tr. 1862 in which the undisturbed days of Greenwich for years 1848 to 1855 were discussed. The disturbed days being then set aside for separate discussion. The present Paper is devoted to the results given. The laws of disturbance being strikingly uniform and so far as can be learned the same at every observatory in every declared where to any other. Such days disturbances accordingly to be treated independently as far as can be effected by a certain definite system of procedure — so as to obtain finally in the form of a curve undulations the simple fluctuations undergone by each of the elements during the storm in question. — The curves so obtained for each individual storm are then compared together throughout the whole series with a view to learn the laws (if any) of resemblance in which they agree & deduce from them whatever general conclusions they may appear to warrant the subject.

The "Magnetic elements" whose fluctuations during storms must be especially noted are not the actual declination in the direction of the horizontal or vertical needle but

THE ROYAL SOCIETY,
BURLINGTON HOUSE, LONDON W.

Paper,—

SIR,

I am directed to send you the accompanying

and to request that you will favour the COMMITTEE OF PAPERS with your opinion as regards its eligibility for publication in the Philosophical Transactions.

The Committee hope that you will be able to examine the Paper sufficiently for the purpose within a month from the present date; if, however, your engagements prevent, I should be obliged by an intimation to that effect.

I remain,
Sir,
Your obedient Servant,

Secretary R. S.

These loose scraps
were attached to each
other by green twine.
The sheets are numbered
1 – 10 in the order in
which they were attached.
(By Herschel?)

Read on Mr Henry's paper on the Synchronous Division of Temperature over the Earth's Surface.

I have perused this paper with the attention I have been able to give it and under the fullest impression of the importance of the subject (any communication and views) founded upon, and the high abilities of the author — but I cannot help saying that the impression I have on rising of last meeting, in the Society to read this paper

and which is a system of hypothetically vague and fluctuating figures as his "Isothermals" and of very great doubt as to their validity as a means of [illegible] guiding us to any clear conception of the results of Solar action in heating atmospheric disturbance or keeping up the regular succession of meteorological phenomena.

If we knew for every point of the globe the [illegible] of diurnal temperature for every day in the year — it would be [illegible]

DS

of course to accelerate the temperature of each particular
point and at each particular moment, and therefore to
connect by a curve those points which one and the
same temperature at that moment. Supposing
that there were ascertained to be desirable in order to
obtain clear views of the solar action on the Barometer
of the atmosphere — the work to be done would consist
at the very least in observing South Curves — 1.st for every
5.rc or 10° of atmospheric temperature from the lowest
to the highest any where prevalent on the Earth's surface
2.d. for each of these curves temperatures to construct
such a series of curves at least for every hour of
the 24 either Greenwich Meantime or of Mean Time

4 August 1849

Dear Sir John,

I am extremely
obliged by the valuable
present of your work which
I received today.

I read you as the
extent from my introduction
I — dear Sir John.

Yours very faithfully
J Whitbread

Sir J. Herschel Bart
&c &c &c

for some other fixed Meridian ~~a fixed~~
and 3ly to do this at least for every month in
the year — since at every particular Meridian of the
Globe (the land of diurnal oscillation is not the
same at all seasons of the year. — In other words
in the Expression $A + B.\cos(x.15^0 + b) + C.\cos(2x.15^0 + c)$ &c
the coefficients A B &c are functions of the Local
Mean Longitude — or of the Time of year — of the
form $\alpha + \beta.\cos(\omega' x + \beta') + \gamma.\cos(2\omega' x + \gamma') + \&c.$
— Thus the complete series of such curves would
consist of 20 Lys (at the least) if for 10° interval of
Temperature, there were $14 \times 24 \times 12 = 2016$ Synchronous
Curves (to embrace the variance from −10° to +120°)
or for Each 10° degree of Temperature of 288 Curves
use of ~~twenty~~ Momentary Lifetimes and Each Lifes

I should be happy if I could be of any service to you in Ireland.

Mrs Lee unites with me in our respects to Lady Herschell and ~~to~~ Miss that all your family are well, and Believe me

My dear Sir

Yours faithfully

J. Lee

Sir John Herschell Bart

from heaven to earth and from earth to heaven into
that region assigned to it in the Lemma
Secondly that such a system of Centres carried
laid down the Radial & Tid which it would require
to obtain any clear conception of Rein forces and to know
how Rein in Rein changes would be so Hard that I
should despair of saying any clear word of the result
of such agency by Enlarging the distribution of Load
over the surface as proposed by Rein

It would be superfluous here to enter into the
[illegible] instead of time the Laws of the Injuries of Bone caused by
[illegible] in consistent
subsidence over the Globe would work and the Law of
Loaded tendency to accompanied movement in the atmo-
sphere — had by Lapse Time tendency caused work and its
effect the Time would Lace shifted at London and form
and the Mind (of course I speak of the Apostle) would become

DS126

expand & bad in any attempt to follow them very closely
& with any certain confidence in respect to probability of
winds or the Convergence of a mean & space & Regarded as
to a mere difference of the momentary land of distribution
of local temperature I confess myself at a loss to perceive
what special interest they can possess.

If these objections to the ~~Equation~~ are however
of taken ~~and~~ in part as ~~being~~ had there is certainly
and strongly in this principle would have any force in the present
of our perfect complete temperature ~~distribution~~ formula
for Station differences numerous and evenly distributed over the Earth's surface & enables the true
form of the Isothermal curves to be obtained — they
had must then strongly ~~in~~ the actual state of the case
when the stations for which such data ~~which~~ are calculated to

By joining Lord Palmerston's Administration I stand pledged to an immediate dissolution.

I am my dear Madam
Yours truly
H. Labouchere

than which would be necessary, almost infinitesimal in
quantity, and less than a very small ~~may~~ compound be the
most acute accepted by the European Continent. ——

The Author of this paper has done all that perhaps
was possible under such circumstances and has hardened
on the conclusion of the Italian Race to Lead as a Race
for ~~Existence~~ of his Cancer evidently a great amount of
Calculation and pains. ~~Still~~ I/9 Statcin human ~~Mind~~ ~~Mind~~
~~for has for to offend any Valuable basis for Such a~~
~~under such circumstances distribution~~
~~supposition~~ offend but a small basis for so vast
a Superstructure. ~~what is this basis~~ And, what
is more medicine, the Italian Physicians, despising these
can so respect for the Statcin in question, are Italian
constructed for and conclusive to

DSI

Some company was preparing
to have a headache too as I came
away this morning; I hope it
may do away the necessity of
their having any when Headed
& James come up

My Love to all
inclose three cheeks

J. Sullivan

Fuerte Pt.
18 May/42

We the Mean diurnal Mean of Temperature at Each Station throughout the year, and the corresponding Mean State of the Barometer at any one Specified Moment of Time Admitting thereby.

If however it is intended to deduce any Conclusions as to atmospheric Movements from the Contemporaneous & Simultaneous Relations of Each Curve, I do not see how it is possible to use Mean Curves, or Take the Curves representing the Mean Values of the Barometric Temperatures — for Such a purpose. — The Curves show from day to day and from hour to hour the Effective action of the Local Variations in Temperature with the Corresponding & Simultaneous Variations in atmospheric movements and Such Temperatures as any wished to determine — Not

Ole Man Mem ale –

Tele Herschel that as one poor
Man deserves another, I send him
down herewith a Paper to sign
just as marked in Pencil, Tasburg
return to G Smith & Co Carlisle
that I may receive the Dividends
specified –

Love yours affectly

Stewart

Carlisle Barracks
27 Mar 67

150

by any such person state of this bed of the Rein & these
admirably Strikg Temperaments of the Sail and amount
of Solar & Radiant Radiation Soing on at that airstand
over the whole world.

These considerations I should think can hardly have
escaped the notice of the Author of the paper in question
and, as ~~would~~ ~~indeed be the case to all things~~ in
hand ~~with the advent~~ of a new kind of acid into
any complex a subject ~~the Author of~~ he appears to
me to have ~~treated it as a matter for the pencil~~
however desirable it may have appeared to him to ex-
amine the statements of his several heirs with as ac-
curate mathematical skill as possible, and what experiments & may have taken to effect such an illustration
I would venture to
submit that all the purposes of the communication would

150

List of Contents of 3 Boxes

J.F.W.H.—A, B, C, MSS

Left in Care of the Royal Society

at Somerset House on Leaving

England

Booked in

Here starts the

Red book B.4.—

To go home by Sound

Hastings

be as well ~~facilitate~~ ridged more expeditiously accomplished (I
by such a statement ~~of~~ ~~in the form of a proposal to such~~
~~subjects as~~ of this words as might be compressed into the
form of an abstract — omitting the tabular work — and
condensing the letter press into such a compass as might
~~form a Census~~ appear in the Works of the Society. The
subject of Lunar and Solar Cycles is so far as I am
revered and it may be desirable that Mr Kemp's Mss should
be familiarized with their consideration — and ~~perhaps, in~~
~~Mr Kemp's consideration it may be~~ when — (if it should
seem that a Lunar appear that their construction on an
Graded Scale would be likely to conduce to a better understanding
of Melancholia ~~with a comparison of the phenomena in Lunar cycles~~ to which admission
reference — ~~the~~ consideration ~~to~~ — construction might
be taken undertaken ~~on such a scale as the subject would seem~~ with all Reasonable advantage to an enlarged Appendix.

1	2	4	8	16
3	6	5	9	17
7	10	12	18	19
11	14	13	20	21
15	22	23	24	25

DSI

P.S. I have not the least objection to (10
this letter being communicated to Mr Pr
Henessy but my time being much occupied
must decline all correspondence on the
subject

7

H. COWLEY,

ALE AND STOUT STORES,

Soda Water & Lemonade Manufactory,

Having purchased the Plant and Stock of Messrs. E. & F. S. WIMBLE respectfully solicits public support, and begs to assure his friends that it will be his anxious endeavour to merit their patronage, by supplying articles of the best description.

Stores : Earl Street, Maidstone,

Jan. 30th, 1861.

150

Collingwood Dec: 10/61

My dear sir,

Neither Lady Herschel nor myself have felt quite equal to going out of late, and have declined more than one invitation to dinner. on that score.

She is far from being quite well, and I have the commencement of my old winter cough coming on, which makes it necessary for me to nurse myself a little. The more so as I have a lecture to deliver here on Tuesday. I hope that we may conclude from your invitation that Lady Mildred has returned, greatly benefitted

Believe me

My dear sir

Very truly yours

J Herschel.

ISO

HERSCHEL, John

Letter to E. Pigott
May 8, 1821 regarding
the founding of an
institution for the advance-
ment of science

HERSCHEL, John

A. L. S. dated May 30,1839
to Prof. Elliott

HERSCHEL, J
Astronomer

A. L. S. dated Oct.23,1828

1285 **HERSCHEL** (J.-F.-W.), célèbre astronome anglais (1792-1871). — L. a. s. au Professeur *Quetelet*, directeur de l'Observatoire de Bruxelles (1828), 2 pp. in-4. 1.000 fr.

Belle lettre d'introduction pour le célèbre navigateur anglais *John Franklin*.

HERSCHEL, John, F.

A.L.S. May 29,1869

512 HERSCHEL (*Sir* JOHN) The Autograph Manuscripts of three Reports to the Royal Society on scientific papers referred to him, with a few similar pieces in his hand, *together c.* 33 *pp., 4to and 8vo, and* a manuscript copy of a speech by him inscribed in his hand "From the Leeds Mercury"

*** Of the reports, one discusses a paper by the Astronomer Royal on Magnetic Storms, and the other two concern respectively papers on Solar Physics and Synchronomous Distribution of Temperature.

.HERSCHEL (Sir J.F.W.) (Printed documents signed by, as Master of the Mint, addressed to J.G. Hubbard, Governor of the Bank of England, asking for his opinion of the public reaction to the introduction of the florin 'as a presumed stage in the transition to a decimal coinage'. November 1854) Single sheet sm.4to WALFORD-61 $6.00 £2.2

826 HERSCHEL, John F. W. Astronomer. ALS, 2pp., 8vo. n.p., n.d. Tells when an occultation will take place. Fine content. ..... Richards 66 15.00

HERSCHEL (**Sir John Frederick William,** F.R.S., 1792-1871) A.L.S. (J. F. W. HERSCHEL), R. Mint, May 25 1853, 1 page 8vo., £1, 1*s* LONDON SOTHERAN 52
Dealing with matters connected with his activity as Master of the Mint.

HERSCHEL (**Sir John Frederick William,** F.R.S., 1792-1871 ; *son of Sir William*) AUTOGRAPH LETTER, signed, 1½ pp. 4to., to Edward Pigott (astronomer), with seal, Slough May 8. 1821, £1,10*s*
'As I well know your fondness for Astronomy and the interest you continue to take in a Science to the progress of which you have yourself contributed, I thought it might not be disagreeable to you to recieve [*sic*] the first annual report of our Institution formed in London for the advancement of the Science, and now . . . enumerating among them a great multitude of the most eminent names.' . . . SH

HERSCHEL, SIR JOHN F.W. (1792-1871) Astronomer.

A.L.S. to an unnamed correspondent. FLETCHER-58

2pp. 8vo. Collingwood: Dec. 10th. 1861.
Declining an invitstion to dine, owing to ill-health & pointing out the necessity of conserving himself for a lecture he is to deliver.

HERSCHEL, SIR JOHN F. W. Astronomer. Autograph letter signed, four pages, 1866, a long scientific letter. [113] $3.00

224 **HERSCHEL, SIR. J. F. W.** Noted astronomer. A.L.s. 1 p., 12mo. Aug. 19, 1853. CARNEGIE-61 $4.00

HERSCHEL, SIR JOHN FREDERICK WM(1792-1871)Astronomer.
Two A.Ll.S. to Sir Robert.
97 6pp. 4to.Collingwood;February 10th and March 18th.1845. £8/8/-
In the first letter he discusses the "wanton destruction of the Portland Vase in the Museum.....perpetrated by wretches determined to accomplish their purpose".. He lists a number of precautions which might be taken against such vandalism, and adds that it should be punishable by flogging. He thought that it was impracticable t piece together the fragments, but he suggests that they should be preserved on a
(P.T.O.)

-2- P.T.O

marble table.
with an accurate copy of the vase and a note "Maliciously destroyed by a visitor Feb.7.1845". In the second letter he gives his support to a Bill which the Solicitor General was to bring in, but saying that protection should not be confined to one or two institutions, He also refers to the "sudden end of Prof.Daniell.....It must have been a tremendous warning to all present". This must be John Frederic Daniell(1790-1845) Chemist & Physicist, who died of apoplexy at a meeting of the Royal Society. FLETCHER 61

HERSCHEL, F

A. L. S. to Edward Pigott dated May 8, 1821 regarding founding of an Institution in London for the advancement of science.

folder is a collection of cuttings from periodicals, proof sheets, *etc.*, of poems that interested Herschel, including a latin translation by William Selwyn of *Enoch Arden* with comments in Herschel's hand.

509 HERSCHEL (*Sir* JOHN) Autograph Manuscript Notes on his Meteoric and Barometric Observations, etc., *circa* 100 *pp., written on*

238. LANKESTER (E.) Ed: Memorials of John Ray, consisting of h
Life by Dr. Derham; Biographical & Critical Notices by Si
J.E. Smith, & Cuvier & Dupetit Thouars, with his Itinerar
etc. Ray Soc. 1846. Backstrip defective, contents good.
Fronts $6.00 £2.2

$6.00 £2.2

printed document certifying that Peter Jones is entitled to land allowed a Corporal of the Conti-
nental Line. 50.00

795 HARRISON, Benjamin. DS. as Pres., folio, 1891. Appointment of a Notary for the District

5741 **HUMBOLDT** (**Friedrich Heinrich Alexander, Freiherr v.**, 1769-1859) ADMISSION TIC
entirely in his handwriting, for D. Julius, 'für die drei letzten Vorlesungen,' *with* 3 *port*
£1, 1*s*

44 **HUXLEY** (**Thomas Henry**, F.R.S.) LIFE and LETTERS of, by LEONARD HUXLEY, LIBRA
EDITION, *with* 3 *portraits*, 3 vols. 8vo. *cl.* (*covers somewhat worn*); *o.p.*, 12*s* 6*d* 19
45 —— CABINET EDITION, *with* 3 *portraits*, 3 vols. cr. 8vo. *cl.* (*o.p.*), 10*s* 6*d* 19
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46 —— AUTOGRAPH LETTER, signed, 2½ pp. 8vo., Geological Survey, Nov. 20. 1871, to Sir Her

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W. D. Howells"
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Herschel, Sir John, F. W. Requiem of the Forty-foot Reflector at Slough. Autograph manuscript poem, 9 verses of 4 lines, with twoline refrain. 4 pp. 8vo. - Requiem Telescopii Herschelianni. (Same, in Latin). - Requiem der 40-fussigen Telescope. (Same, in German).- The Herschelian Telescope Song. (Same, printed proofs, annotated by Herschel, with another poem). 6 pp. 12mo. Together, 12 pages in autograph manuscript, and 6 printed pp.

Slough, c. 1840-43. $ 95.00

The Herschel 40-foot reflector telescope (48 inch diameter) was constructed by Sir Frederick W. Herschel, father of Sir John Herschel, and was used by him in many of his great astronomical discoveries. The large telescope was dismantled following Sir Frederick's death in 1822, his son using a smaller but more efficient instrument. The poem here present in three manuscripts and one corrected proof version was written for a New Year's Eve party held in the tube of the old instrument on Dec. 31, 1839.

80

Fletcher
23.IV.58

HERSCHEL, SIR JOHN FREDK.WM. (1792-1871) Astronomer.

Two manuscripts, one being an A.L. unsigned from (Mr. Stewart) to Sir John Herscehl; and the other a draft copy of Sir John Herschel's reply in his handwriting.

6½pp. folio. (letter) and 23pp. folio (draft copy of reply). N.D. £30/-/-
In his letter Mr. Stewart explains that he is a doctor and that he will be spending 8 years in India practicing his profession, during which time he wished to study. He asks Herschel to map out a course of study for him.
Herschel's reply is a most interesting document, as in it he sets out his ideas on the purpose of education, and then gives a detailed list of books which he recommends for the study of each subject. His correspondent asked him to name the standard authorities "which approximate nearest to my own ideas of what, in each, is the truth". He writes:- "In fact there are no books I have ever read (those on mathematical subjects excepted....) which have impressed my mind as containing the truth - the whole truth...". He believed that "the Divine will & laws become revealed to the human species...." in time, measure and manner as they can be understood. He then continues to discuss the following subjects, giving his advice in each case - History; History of the Fine Arts, suggesting Reynolds' Discourses; Mathematics, which he recommends "for the sake of the habits of patient and concentrated thought"; Euclid, suggesting Newton's Principia; Algebra, suggesting Hirsch's Resolution of Algebraic Equations; Mechanics; Dynamics; Astronomy, suggesting his own books and Laplace's Systeme du Monde; the Physical Sciences, including Botany, Geology, Mineralogy, Chemistry; Practical Mechanics & Engineering; Music; and Political Economy.
In discussing History and Political Economy, Herschel puts forward his ideas on the conduct between individuals and nations in the ideal state. "Men lay down as first principles of conduct, universal benevolence", but "How am I to make my conduct square with universal benevolence?". He believed in free intercourse between all classes. In discussing Philosophy and Logic he writes:- "A Philosophical Logician then will always aim at strictness & close adhesion to etymological correctness in the use of words & this Philology becomes no mean part of logic .....elucidating the laws of thought and the origin of nations....." Herschel states that he knew no work which "treats in this extensive sense" and that he thought of writing such a work himself. In conclusion he advises his friend "To devise a system of self-examination", saying that "it is only by putting one's whole conception of a subject into writing....that...you then feel at once where you are sound and secure, and where you are only glossing over superficial or imperfect views".

ISO

THE LATE SIR JOHN HERSCHEL.

European science has lost one of her illustrious members in the person of Sir John Herschel, whose death we recorded briefly in our columns yesterday, at the age of 79.

Sir John Frederick William Herschel, F.R.S., &c., was the son of that eminent astronomer, Sir William Herschel, who just 90 years since discovered the Georgium Sidus, or Uranus, as it was called at first, but which is now known by the name of its discoverer—the planet Herschel. His mother was Mary, daughter of Mr. Adee Baldwin, and he was himself born at Slough, Buckinghamshire, on the 7th of March, 1792. He received his early education privately, under a Scotch mathematician named Rogers, from whose hands he passed to St. John's College, Cambridge, where he took his Bachelor's Degree in 1813, coming out as Senior Wrangler and first Smith's Prizeman. In the same year he published his first work, *A Collection of Examples of the application of the Calculus to Finite Differences.* In 1819 he commenced a series of papers in the *Edinburgh Philosophical Journal* on miscellaneous subjects in physical science, and in 1822 communicated to the Royal Society of Edinburgh a paper on the absorption of light by coloured media, which will be found in the ninth volume of the *Transactions* of that society. He spent a great part of the years of 1821-1823, in conjunction with the late Sir James South, in making a number of observations on the distances and positions of numerous stars, a full account of which is to be seen in Part III. of the *Philosophical Transactions* for 1824. In the following year he began to re-examine the numerous nebuæ and cluster of stars which had been discovered by his father. On this work he was employed for eight years, and its results will be found in the volume of the above-mentioned work for 1832. The catalogue includes upwards of 2,300 nebulæ, of which 525 were discovered by Sir John himself. It may be added that while engaged upon this work, he also discovered between three and four thousand double stars, which are described in the *Memoirs of the Astronomical Society.* These observations were made with an excellent Newtonian telescope, 20 feet in focal length and 18½ inches aperture ; and "having obtained," to use his own words, "a sufficient mastery over the instrument," he conceived the idea of employing it in the survey of the southern heavens.

Accordingly he left England in November, 1833, and reaching the Cape in January, 1834, fixed his residence in the neighbourhood of Table Bay. He there set up his instruments, and was shortly able to commence a regular course of "sweepings" of the southern heavens. His observations were continued till May, 1838, the whole of the expense attending them being borne by Herschel himself. The interest felt by the scientific world of Europe and America in the progress of his labours was very great, and, from time to time, curiosity was gratified by accounts of some of the observations conveyed to friends by letter ; but it was not until 1847, some years after his return to England, that the collected digested results of his four years' residence at the Cape were published in regular form, when he published his volume entitled *Results of Astronomical Observations made during* 1834-38 *at the Cape of Good Hope ; being the Completion of a Telescopic Survey of the Whole Surface of the Visible Heavens, commenced in* 1825. Although the astronomer's main object in the southern hemisphere, as in the northern, had been the detection of new and the re-examination of old nebulæ, his observations extended themselves so as to include all he objects for which his position was favourable. Indeed, not only was a mass of new observations appertaining to the southern heavens added to astronomical science by the survey, but many of the extreme speculations of the elder Herschel and others relative to the highest problems of astronomy were reviewed afresh in the light of the new observations. The substance of these has since been incorporated in all the more recent works of general astronomy. Besides his astronomical labours at the Cape, he was always ready to give the colonial authorities his advice and aid on scientific and educational matters. It is to him that the Cape colonists are mainly indebted for the very perfect system of national education and public schools which they now enjoy, and which he was enabled to carry out through the sagacity and liberality of the late Sir George Napier, at that time Governor, and of his Colonial Secretary, Mr. Henry Montagu.

It is worthy of remark, says a writer in the *English Cyclopædia,* that Herschel's residence at the Cape was productive of benefits not only to astronomy but also to meteorology. While occupied there, he suggested a plan of having meteorological observations made simultaneously at different places—a plan subsequently developed at greater length in his *Instructions for making and registering Meteorological Observations at various stations in Southern Africa,* published under official military authority in 1844. He had already received from the hands of King William IV. the Hanoverian Guelphic Order of Knighthood, and on his return to England in 1838 he was received with every possible public honour. During his absence in the southern hemisphere the Astronomical Society had voted to him their Gold Medal in 1836. Two years later, on the occasion of the coronation of Queen Victoria, he was created a baronet. In 1839 he was made an honorary D.C.L. of Oxford University, and there was a proposal, which he declined, to elect him to succeed the late Duke of Sussex in the presidential chair of the Royal Society. In 1842 he was elected Lord Rector of Marischal College, Aberdeen. In 1848 he was President of the Royal Astronomical Society, and in the same year the society voted him a testimonial for his work on the southern hemisphere. Having by that time completed the digest and publication of his observations at the Cape, during the preparation of which, however, he had published various incidental papers in the *Transactions of the Astronomical Society*—he was free to pass to other labours. Of these the most important of a literary kind was his work entitled *Outlines of Astronomy* (enlarged from his former treatise in *Lardner's Cyclopædia*), which he published in 1849. In the same year he edited a collection of papers by various authors, published by authority, and entitled *A Manual of Scientific Inquiry, prepared for the use of Her Majesty's Navy, and adapted for Travellers in general.* In December, 1850, when the Mastership of the Mint was converted from a Ministerial into a permanent office, it was conferred upon Sir John Herschel, and this post was retained by him till 1855, when he resigned it on account of ill-health, and Professor Graham, the eminent chymist, was appointed his successor.

Sir John Herschel was the author of the articles on "Isoperimetrical Problems" and "Mathematics" in the *Edinburgh Encyclopædia,* and of "Meteorology" and "Physical Geography" in the *Encyclopædia Britannica* (the last two of which have been republished separately), and also of several articles on scientific subjects in the *Edinburgh* and *Quarterly Reviews,* which were collected and published in a separate form in 1857, together with some of his lectures and addresses delivered on public occasions. He besides occasionally contributed to *Good Words* some popular papers on the wonders of the Universe ; and some two or three years ago he gave to the world, in the pages of the *Cornhill Magazine,* a poetical version of part of the *Inferno* of Dante. He was also one of the too numerous translators of *Homer.*

Sir John Herschel was an honorary or corresponding member of the Academies of St. Petersburg, Vienna, Göttingen, Turin, Bologna, Brussels, Naples, Copenhagen, Stockholm, and of almost all other scientific associations in England and America. To his other honours was added that of Chevalier of the Prussian Order of Merit, founded by Frederick the Great, and given at the recommendation of the Academy of Sciences at Berlin. We regret that the limited space at our disposal prevents us from giving a more detailed account of the scientific labours of Sir John Herschel. Few philosophers of an age which has produced a Faraday and Brewster have attained distinction equal to that which he earnt for himself. His mathematical acquirements and his discoveries in astronomy, in optics, in chymistry, and in photography were all of a very high order, and such as, aided by an admirable style, secured for him the widest reputation among men of science, both at home and abroad ; while his numerous popular writings have contributed largely to the diffusion of a taste for science, and an acquaintance with its principles among our countrymen.

Sir John Herschel married in 1829 Margaret Brodie, daughter of the Rev. Dr. Alexander Stewart, by whom he had a family of nine daughters and three sons. One of the former is married to General the Hon. Alexander Gordon, uncle of the present Lord Aberdeen, and now heir presumptive to that title. His youngest son is an officer in the Royal Bengal Engineers. He is succeeded in the title by his son, Mr. William James Herschel, of the Bengal Civil Service, who was born in 1833, and married in 1864 Miss Anne Emma Haldane Hardcastle, daughter of the late Mr. Alfred Hardcastle, of Hatcham, Surrey. May 1871.

PARLIAMENTARY INTELLIGENCE.

HOUSE OF LORDS, FRIDAY, MAY 12.

The LORD CHANCELLOR took his seat on the woolsack at 5 o'clock.

Lord SANDHURST (better known as Sir William Mansfield) took the oath and his seat.

PRIVATE BUSINESS.

The Whitby Gas, Thirsk Gas, and Kidsgrove Gas Bills were read a second time; and Brown's Estate, the Wicklow Copper Mining Company, Rhyl District Water, Great Northern and Western of Ireland Railway, and Manchester, Sheffield, and Lincolnshire and North Staffordshire Railway Companies Bills were read a third time and passed.

PETITION.

The Earl of SHAFTESBURY presented a petition from Stratford, in Cheshire, for the repeal of the Contagious Diseases Acts.

REFORM OF THE ECCLESIASTICAL COURTS.

The Earl of SHAFTESBURY gave notice that he proposed to postpone the second reading of the two Bills on this subject which stood for Tuesday next, till the 22d inst. His reason for doing this was that the Archbishop of Canterbury had expressed a great interest in the Bills, and a hope that they would be considered at a time when he could take part in the discussion.

THE ALABAMA CLAIMS.

Lord REDESDALE asked the Government if the question whether the United States could, according to the principles of iuternational law, persevere in the Alabama claims since the reconciliation of the Southern with the Northern States had been brought before the Joint Commission, or would come before those who were finally to determine those claims. He was anxious that an important point of international law should receive full consideration, which he believed had notyet been the case, before this matter was settled—viz., the great part which the Southern States had in the building and fitting out of the Alabama and other vessels. They ordered and paid for the ships, and the injury to the trade of the North was committed by them; yet they were now represented by President Grant's Government, which made the claim for compensation. Thus Virginia and the other Southern States were asking us to give an indemnity for the injury committed by themselves. This in private life would be unjust, and he contended that the American Government were barred by the course they had taken towards the Southern States from prosecuting the claim. Had the South achieved its independence, and had the claim of the North against this country been substantiated, we should certainly have asked the South to reimburse us for the damages awarded, the injury having been committed by and for it. The North could have required the South, as a condition of peace, to give compensation for that injury; but, it having thought proper to forgive the principal, how could a claim be made against the agent? A man who had received a sound thrashing might as well, after forgiving his opponent, proceed against the man who lent him the stick (a laugh), and he did not believe that in such a case an action would lie. He was not aware of any precisely analogous case, for such an occurrence was necessarily rare. The Southern States were treated, not as rebels, but as belligerents by the North, and so far as warlike operations were concerned they were clearly an independent country. They had, therefore, all the responsibilities of that position. If A ordered B to do something whereby he was benefited, but which exposed B to a severe penalty, it would be thought very unhandsome for A to file an information against his own agent in order to obtain damages; and the case was little altered if A, while not bringing the action himself, allowed his brother or partner to do so. Now, the law of nations ought to agree with the law as between man and man, and he could not see how a claim could fairly be preferred under such peculiar circumstances as existed in this case.

The Earl of LAUDERDALE believed there was no just claim against us. If during the Crimean War the Americans had sold Alabamas to Russia, it would not have entered the head of any British statesman to demand damages; and even if it had, our friends over the water would only have laughed at us. It might not be generally known that at that time they allowed a man-of-war to be fitted out in one of their ports with guns and warlike stores, which vessel rounded Cape Horn, reached Valparaiso, and by a little treachery escaped the examination of an English vessel lying there, so that it proceeded to San Francisco, where a Russian agent went on board, and was taken to a Russian port. An American officer who went with it was presented to the Emperor, who gave him the usual snuffbox studded with diamonds. (A laugh.) He hoped we should hold our own in this matter, but he feared that before long we should be saddled with a considerable bill.

Earl GRANVILLE thought that, as the question was likely to be referred to arbitrators, the noble and gallant earl would understand that it would not become him at the present stage to enter into any argument on the subject. The same feeling would influence his reply to the noble lord (Redesdale), who had raised a point which had not, that he was aware, been previously raised. It certainly had not suggested itself to the legal advisers of the successive Governments which had had to deal with the question, and it had not formed a portion of the instructions given to our Commissioners. Whether it was a good or a bad one he would not say, but it might no doubt have been a proper point to refer to the Commissioners in settling, not the claims, but the mode in which they should be adjusted. Without giving any opinion on the matter, he would only add that it would be the duty of the Government to consider every possible point which could honourably and fairly be urged against the claims of the United States. The noble lord had implied that this country had recognized the Southern States as an independent country, but the only recognition they received from us, and the recognition of which the North complained, was that of belligerents, and as far as the Government of that day was concerned the question of recognizing their independence was never even entertained.

The Earl of DERBY asked when an authentic copy of the treaty, which could at present only be judged of from statements in the public Press, would be presented.

Earl GRANVILLE replied that the amount of telegraphic communication between the Government and our Commissioners had been immense, but information based thereon would obviously be insufficient. The whole treaty—part of which, referring to the Alabama claims, was given with general accuracy in *The Times* of this morning—left Washington the day before yesterday by the usual means, and would probably arrive at the end of next week. There were some technical difficulties, but the Government were anxious that Parliament should not be without information any longer than was necessary.

Lord REDESDALE maintained that to recognize parties at war with another State was to acknowledge their independence, and vested them with the responsibilities of an independent State.

THE SMALLPOX EPIDEMIC.

Lord BUCKHURST asked whether the Government intended to propose additional precautionary or remedial measures for checking the spread of smallpox in the metropolis. The Registrar-General's reports showed the great ravages which smallpox had lately committed, not only in the metropolis but in the large towns. The number of deaths in the metropolis last week was 1,582, 47 above the average of the corresponding week during the last ten years, the zymotic class, or cases of an infectious or contagious nature, being 447, of which 288 were cases of smallpox. The number of deaths therefrom during the previous three weeks were 265, 276, and 261, and the mortality from this cause during the present epidemic had been almost three times as great as had been known during the last 30 years. This time last year the cases were only three or nine a week, whereas in the 12 weeks ending the 29th of April there were in London 2,688 fatal cases, of which 1,212 were unvaccinated and 973 vaccinated, while there was no return as to the remainder. Out of 85 children admitted into Hampstead Hospital during a fortnight only 46 had been vaccinated. It was evident that the Vaccination Act, in spite of the stringent orders of the Poor Law Board, was not properly enforced. Moreover, in St. Pancras, with a population of 200,000, the number of vaccination stations lately appointed was only five, so that some of the parishioners were three miles from the nearest of them, and it was not likely that children would voluntarily be taken such a distance. Persons frequently lived nearer a vaccinator in a neighbouring parish or union, who, however, was not allowed to undertake their case. Now surely the stations should be arranged with a view to general convenience rather than with reference to parishes or unions. The metropolitan hospitals were overflowing, and he hoped to hear that additional accommodation was being provided, as also that steps were being taken to enforce vaccination The noble lord concluded by moving for a return of the births and vaccinations in the metropolis during 1869.

Lord ORANMORE testified to the success of the Vaccination Act in Ireland, where smallpox had almost disappeared. The Poor Law medical officer was usually Registrar, and being thus acquainted with the births he was able to summon parents who neglected to vaccinate their children. He knew of one such officer who had been dismissed for failing in this duty. The system of stations was also very effective. If the same powers existed in England, it was only necessary to enforce them to prevent the recurrence of such a disaster.

Lord LYTTELTON, as the author of the first compulsory Act on the subject, trusted that the Government would take steps to secure an improved administration of the law, which was all that was requisite. In some of the smaller European capitals, where the Executive were naturally more powerful, the disease had almost disappeared.

The Earl of KIMBERLEY, admitting that in Ireland smallpox had almost disappeared, attributed the want of

FUNERAL OF SIR JOHN HERSCHEL.

In the year 1822 the elder Herschel was buried in the little church of Upton, near Slough ; and now, after an interval of nearly half a century, the body of his scarcely less distinguished son has just been publicly consigned to its last resting-place in Westminster Abbey. Sir John Herschel's funeral was celebrated yesterday with full choral service, in the presence of a large circle of attached friends, nearly all the men of science of the day, and a numerous assemblage of the public, who filled the sides and west-end of the nave. At 12 o'clock the body, which had arrived by railway from Kent half an hour before at the Charing-cross Station, in a hearse attended by a single mourning coach, was carried into the nave by the cloister entrance as the choir, accompanying the organ, sang the well-known sentences beginning "I know that my Redeemer liveth." The procession having wound its way up the nave and reached the sacrarium, the coffin, which was of plain polished oak, was placed on trestles before the alter. The lesson (from the 15th chapter of the First Epistle to the Corinthians) was read by Archdeacon Jennings. The remaining portion of the service was sung at the grave by the choir, except the part read by the Dean, and it concluded with the anthem of Handel, "His body is buried in peace ; but His name liveth for evermore." The Dean gave the final blessing. The Canons present on the occasion were Canon Nepean, Canon Jennings, and Canon Protheroe, and the whole body of Minor Canons attended. The grave is at the eastern end of the north aisle, near to the tomb of Sir Isaac Newton, under the painted window recently erected to Robert Stephenson, and at the foot of the monument to Lord Livingston. The pall-bearers were—the Duke of Devonshire, Chancellor of the University of Cambridge ; M. le Duc de Broglie, Member of the Institute of France ; Mr. George B. Airey, the Astronomer-Royal ; General Sir Edward Sabine, President of the Royal Society ; Sir Charles Lyell ; Mr. William Lassell, President of the Royal Astronomical Society ; Sir Henry Holland, President of the Royal Institution ; and Sir John Lubbock. The list of mourners included Mr. A.S. Herschell, chief mourner; General the Hon. A. Gordon, Mr. Reginald Marshall, Mr. John Stewart, Messrs. Edward and Henry Hardcastle ; Mr. William Spottiswoode, Dr. Parry, Bishop Suffragan of Dover ; Mr. H. C. Morland, Mr. J. P. Gassiot, Colonel Strange, Mr. G. R. Waterhouse, the Rev. Charles Pritchard, Savilian Professor of Astronomy ; Mr. J. H. Nelson, Mr. A. Beresford-Hope, M.P., Professor Tyndall, Professor Owen, Professor Adams, the Rev. J. Jeffreys, and Sir Charles Wheatstone. Among those also present in the Abbey on the mournful occasion were Sir John Bowring, Mr. Charles Darwin, the Dean of Salisbury, Messrs. Norman Lockyer, M. D. Conway, and Warren De la Rue, Professor Sylvester, Lady Augusta Stanley, and several other ladies, and a large number of men celebrated in every department of science. The funeral arrangements were under the control of Messrs. Banting, of St. James's-street, and the mournful ceremony was brought to a conclusion shortly after 1 o'clock.

THE MURDER AT ELTHAM.

Yesterday morning, Edmund Walter Pook, 20, printer, was again placed in the dock before Mr. Maude, at the Greenwich Police-court, charged with the wilful murder of Maria Jane Clousen, aged 17, in Kidbrooke-lane, leading to Eltham, on the night of the 25th of April.

Mr. Poland, on the part of the Treasury, attended to prosecute; Mr. Pook, solicitor, of Greenwich, appeared on behalf of the prisoner; and Mr. Moore, of the Associate Institute for the Protection of Women and Children, attended to watch the case.

The court was again inconveniently crowded, large numbers being unable to gain admittance, and several influential persons resident in the neighbourhood occupied seats upon the bench.

Mr. Poland, addressing the magistrate, said he had very few observations to offer to the Court that day, but after he had called witnesses and given further evidence, it would be his duty to ask for another adjournment of the inquiry, in order that ample time might be given to the police to make further inquiries, as it was to the interest of the prisoner, as well as of the public, that these inquiries should be made into all the circumstances attending so horrible a murder. In addition to this, there were special reasons why another remand should be granted.

Mr. Pook here said that he objected to Mr. Poland making observations upon the evidence to be given by witnesses whom he proposed calling; and

Mr. MAUDE ruled that the evidence should be first given, when observations might be made upon it by counsel.

Mr. Poland said he would then proceed with the case, and called

Miss Alice Durnford, who said,—I reside with my parents at Bridge-place, Lewisham, I have known the prisoner about 18 months, and have kept company with him 12 months during that time. The last time I saw him before the murder was a week or a fortnight before Easter last. The prisoner did not visit me at my father's house, my parents not being aware that I had any acquaintance with him. When the prisoner came near my father's house he used to give a signal by means of a whistle he carried with him. (Inspector Mulvany here produced a small metal whistle, on examining which the witness said it was similar to that carried by the prisoner.) The whistle was carried by the prisoner in one of his pockets, but I cannot say whether the trousers' pocket or not. I have been in the habit of receiving a letter now and then written by the prisoner. I cannot say that the last time the prisoner came near my father's house he whistled. I saw him once or twice a week during the time we were acquainted with each other. Generally, the prisoner dressed in dark clothes and wore a low felt hat. It was a great coat I last saw him wearing—a black coat, I believe. I do not recollect any reason being given by the prisoner for not coming to me at my father's house, but the last time we were together we did not part very good friends.

Mr. Pook protested against the witness being interrogated in this form, as what had occurred between the witness and the prisoner prior to the murder could have no connexion with the case under investigation.

Mr. Poland said he should put the questions as he had already put them until stopped by the magistrate.

Southampton, Aug 1, 1828

Dear Sir

I have read Mr. Knowles' paper of which (as I have not the pleasure of its author's acquaintance) I prefer making my remarks on it to yourself from whose hands I received it as, although I cannot possibly have the least objection to your communicating the whole or any part of them to him, I am unwilling to involve myself in any correspondence on the subject in defence of my view of it should it not prove such as further reflexion may lead him to form.

I obtained my first knowledge of the differential calculus from Simpson's Fluxions of which it appears to me that the groundwork is the identical principle which Mr. Knowles professes to start from. - viz: that the fluxion of a quantity is the velocity with which it flows or changes magnitude - estimating that velocity not by the actual quantity by which it really does change in one unit of time - but, by the quantity by which it would change in that time were it to continue from the instant in which it is considered to vary uniformly.

Simson applies this to tangents precisely as Mr. K. does - viz by the little triangle PSR in which SR represents the hypothetic uniform variation and QR the actual variation of the ? I recollect his notion of the generation of areas too. The area MPRN or yx is the area by which ABPM would increase while ? increases uniformly by MN or x provided its rate of increase continued uniform fromPM - while its actual increase is represented by PMNQ in the sme time.

The reasoning in Mr. Knowles' note (A) is I presume that by which everyone would naturally connect this notion of fluxions with the purely analytical theory of in Taylor's theorem. The reasoning employed in the body of the paper for that (?) purpose I confess, after reading it over several times, I do not understand.

I address this to you at Bury St. Edmunds, but the paper itself I send by today's coach to York Gate. We are endevouring to get rid of a few weeks by a system of daily transplantation from place to place along this line of coast at the rate of about 20 miles per diem and if we can muster up energy enough I shall probably take a ride round the isle of Wight. My Mother desires to be very kindly remembered to Mrs. Kater to whom pray give my compts. and believe me Yours very truly

W HERSCHEL

P.S. Have you seen Encke's Berlin - While we have been shilly-shallying he has been doing. England seems fated now to lag in the rear of all her neighbors - at least in Science.

Many thanks for your paper. Since before I left I got observations enough about 2 satellites whose orbits are such as my Father conceived and I am almost sure there are others. - Its place is very unfavorable. has changed quadrants since 1825 & its motion is much more rapid than we supposed (South and & myself).

J. W. HERSCHEL

ISO

AUTOGRAPHE

de

Herschel

Sir John Frederick William

OBSERVATIONS

1) *L.a.s. 8 p. 4° Royal Society*
10. VIII. 1839 ersuchen Arago
Sabine mitzutheilen über
Todmagnetismus, betreffend die
Resultate über die ganze Erde zu
diesem Behufe angestellten Beobachtungsstationen.

2) L.a.s. 3 p.8°, Collingwood, 30.I. 1864, an Abbém Moigno, wegen der Publikation einer Arbeit H.'s in der Zeitschrift Moignos „Monde"

3) Sir John Frederick William, Astronom und Physiker, Sohn von H. 1), geb. 7. März 1792 in Slough bei Windsor, gest. 11. Mai 1871 in Collingwood (Kent), studierte in Cambridge und beobachtete seit 1816, z. T. gemeinschaftlich mit J. South, hauptsächlich Doppelsterne, von denen er eine große Anzahl neuer entdeckte, die er in elf Katalogen veröffentlichte. Auch gab er zwei einfache Methoden zur Berechnung der Bahnen der Doppelsterne an. Daneben unterwarf er seit 1825 die von seinem Vater entdeckten Nebelflecke und Sternhaufen einer neuen Beobachtung und veröffentlichte 1864 seinen großen »General catalogue of nebulae and clusters of stars«, der alle bis dahin bekannt gewordenen Nebel und Sternhaufen (5079) umfaßte. 1834 ging er nach dem Kap der Guten Hoffnung, wo er bis zum Mai 1838 die ganze südliche Hemisphäre des Sternenhimmels aufs genaueste durchmusterte und eine große Reihe von neuen Doppelsternen und Nebeln entdeckte. Die Resultate dieser Expedition sind in den »Results of astronomical observations made at the Cape of Good Hope« (Lond. 1847) niedergelegt. 1838 wurde er zum Baronet ernannt; das Mareshal College erwählte ihn im März 1842 zu seinem Lord-Rektor, und von 1850—55 bekleidete er das Amt eines Direktors des königlichen Münzwesens. Die Ergebnisse seiner physikalischen Studien enthalten unter andern folgende Schriften: »On the theory of light« (1828; deutsch von Schmidt, Stuttg. 1831); »Treatise on sound« (1830); »A preliminary discourse on the study of natural-philosophy« (1831; deutsch von Weinlig, Leipz. 1836) und »A treatise on astronomy« (deutsch von Michaelis, das. 1837), welche Schrift, mit den Ergebnissen der neuesten Entdeckungen bereichert, 1849 u. d. T.: »Outlines of astronomy« (12. Aufl. 1875) erschien. In Verbindung mit einigen andern Gelehrten arbeitete er zum Gebrauch der Marineoffiziere ein »Manual of scientific enquiry« (1849) aus. Schon 1820 hatte er eine Sammlung von Aufgaben aus der endlichen Differenzen- und Summenrechnung geliefert (deutsch von Schnuse, Braunschw. 1859). Mehrere für die »Encyclopaedia Britannica« gelieferte Arbeiten erschienen auch in Sonderausgaben, so die »Physical geography« (neue Ausg. 1871), »Meteorology« (2. Aufl. 1870). Auch schrieb er eine Biographie des Astronomen Baily (Lond. 1845) und »Popular lectures on scientific subjects« (neue Ausg. 1895).

DSI